MONEY, SOCIAL COHESION AND INFLATION

The Brazilian Economy in the 1980s

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ABSTRACT

The importance of money for the reproduction of modern capitalist economies is commonly neglected by neoclassical economics. This thesis proposes an alternative view in which money is understood as an institution which provides some of the necessary conditions for the generation of productive wealth in capitalist economies. Moreover, as the productive circuit is one of the spheres of modern capitalist economies in which private and social aims are made compatible, money is presented as an element of social cohesion.

Both the emergence and the maintenance of the institutional character of money are assessed by resorting to distinct but compatible approaches to money (economic, sociological and anthropological). The thesis examines the importance of the main functions of money for the activation of the productive process and develops the concept of unity of the functions of money. As opposed to the merely descriptive analyses of those functions made in textbooks, this approach emphasises their conventional nature and argues that only if the monetary unity is maintained can money operate as a social institution.

It is shown both how accelerating inflation menaces the unity of the functions of money and how modern capitalist economies continually adapt their institutions and behaviours to overcome such disturbing effects. A qualitative taxonomy of inflation (low, high and hyperinflation) is proposed to demonstrate the limits of those adapted economies (low, high and hyperinflation regimes) to maintain the unity of the functions of money if inflation persists in accelerating. The institutions required to stabilize an economy whose monetary unity is threatened are also discussed.

This theoretical framework is used to appraise the Brazilian monetary crisis in the 1980s as a process of progressive rupture of the unity of the functions of money. Such assessment traces the origins of the Brazilian high inflation regime in the mid-1960s and shows how contradictions evolved over the years made it a self-defeating regime in the 1980s, eventually destroying the role of money as an element of social cohesion.
To my father
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The usual caveats obviously apply.
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INTRODUCTION

Modern capitalist economies are immersed in monetary relations. However, because money is present in so many different dimensions of life it makes it difficult to tell what money really is. Moreover, its roles and meanings are so blurred by overexposure that its importance is commonly neglected. Nevertheless, and despite that clouded context, this thesis claims that the centrality of money in modern economies urges the elucidation of both its functionality and relevance for those economies' operation and reproduction.

By following this route, the present approach vividly diverges from the neoclassical literature and most textbooks in economics. These works commonly present the functions of money in a purely descriptive and mechanical way and dismiss the importance of money by introducing it as a mere add-on to relations ultimately defined in real terms. In contrast to that tradition, this thesis emphasises the monetary nature of modern capitalist economies. More importantly still, it stresses the relevance of money for the generation of productive wealth in modern economies and therefore for the continued reproduction of some of the structural properties of their social systems. In this sense, the character of money as a social institution is highlighted. Moreover, by providing some of the necessary requisites for the operation of the productive sphere, money creates the conditions for those who command the financial and productive resources of the economy to generate profits through the creation of goods and income. In this sense, money unifies private interests and social needs and is, accordingly, presented as an element of social cohesion.

Although the institutional dimension of money has been discussed in sociological and anthropological terms (e.g. Simmel (1990) and Polanyi
(1977)), it is almost completely ignored from an economic perspective.\textsuperscript{1} Moreover, a significant part of those studies either explicitly discuss that role only in pre-capitalist economies or implicitly ignore the specificity of monetary relations in modern capitalist economies. This thesis, instead, explores the institutional character of money taking into account the singularity of an economic system whose material reproduction depends on the capacity of its members to establish monetary contractual relations. Despite its economic standpoint, this thesis also discusses the links between the purely economic role of money for the reproduction of modern capitalist economies and the social, political and cultural dimensions involved in the maintenance of money as a social operator. Those links reveal the fact that the institutional character of money cannot be taken for granted and that it is based, instead, on the maintenance of fragile social conventions.

The thesis also claims that high and accelerating inflation undermines confidence in the endurance of those conventions and may therefore ruin the role of money as a social operator. In this sense, inflation may destroy some of the conditions necessary for the reproduction of modern capitalist economies. Finally, the theoretical framework is used to appraise the Brazilian monetary crisis in the 1980s as a process of progressive deterioration of money as an element of social cohesion.

The thesis is set out as follows. After introducing some central concepts for the thesis, chapter 1 discusses two contrasting theoretical views regarding the importance of money for the creation of productive wealth: the General Equilibrium and the Post Keynesian approaches. Whereas

\textsuperscript{1} Some of the few exceptions (e.g. Aglietta and Orléan (1990) and Orléan (1992)) will be dealt with in chapters 2 and 3 below both to elucidate parts of the argument and to differentiate them from what is being proposed here.
for the former money has no relevant function to play, for the latter money cannot be dissociated from the real world of production. Following the demarcation of this radical divergence, it is argued that, although demonstrating the importance of money to determine the extent to which the productive sphere is activated, the Post Keynesian approach takes the monetary nature of contractual relations for granted, thereby failing both to explain the relevance of money as the conveyer of some of the necessary conditions for the activation of the productive sphere and to examine the requirements for preserving the institutional character of money.

In order to unveil the importance of money as the provider of the necessary conditions to activate the productive sphere, chapter 2 examines how the main functions of money (standard of value, means of payment and store of value) are, each in a specific way, essential for the establishment of contracts. By so doing it demonstrates the emergence of money as an element of social cohesion. Chapter 3, in turn, emphasises the complementary character of the functions of money and develops the concept of unity of the functions of money: it is claimed that only if confidence in the relations of representativeness and convertibility between the instruments which perform the functions of money is maintained can money operate as a social institution in a modern economy. Finally, both the conditions required for preserving that confidence and its intrinsic fragility are assessed.

Chapter 4 concludes the theoretical part of the thesis by showing how accelerating inflation menaces the unity of the functions of money and how, in modern capitalist economies, institutions and behaviours continuously adapt to overcome such disturbing effects. A qualitative taxonomy of inflation (low, high and hyperinflation) is proposed to demonstrate the limits of those adapted economies (low, high and hyperinflation regimes)
to maintain the unity of the functions of money if inflation continues to accelerate. The institutional and behavioural changes required to reverse the deterioration of the monetary unity are also discussed.

Chapters 5 to 7 resort to the Brazilian experience of living under high inflation for almost three decades to illustrate how the present approach can be applied, so that commonly neglected but essential aspects of monetary crises can be brought to light. By so doing, they also offer an original view on the consequences of the Brazilian crisis in terms of the deterioration of the mechanisms of structuration of the Brazilian society. Chapter 5 traces the origins of the Brazilian high inflation regime back to the mid-1960s. It is presented as an unplanned outcome of institutional reforms in the financial system. Its main characteristics were widespread indexation of monetary contracts and the use of indexed financial assets as store of value. Despite high levels of inflation, those institutional changes and the behavioural adaptations which followed them provided the conditions required to preserve money as a social operator until the late 1970s.

The acceleration of inflation in the early 1980s undermined confidence in the capacity of those institutional arrangements to maintain the unity of the functions of money. Nevertheless the monetary unity was maintained for most of the rest of the decade. In this context, chapter 6 examines how the Brazilian high inflation regime evolved over that period and preserved the institutional character of money. It is shown that the adjustment policies implemented by the government to solve the crisis of the balance of payments both induced behavioural changes and created institutional mechanisms which restored confidence in the unity of the functions of money.

Despite the apparent success of those adaptations, chapter 7 claims
that the new structure contained the seeds of its own destruction. Although accommodating the disruptive effects of accelerating inflation in the short term, the institutions and behaviours characteristic of the Brazilian high inflation regime possessed contradictions which, by the end of the decade, had undermined the confidence in the unity of the functions of money. As a consequence of the gradual destruction of that confidence, the space of contractual relations was disorganised and compatibility between private interests and social needs became more difficult to achieve. In this sense, it will be shown that although sustaining money as an element of social cohesion for most of the decade, the adaptations of the high inflation regime ultimately destroyed it as a social operator.

Finally, chapter 8 summarizes the main findings of the thesis and sets out the conclusions.
CHAPTER 1. MONEY AS A SOCIAL INSTITUTION: PRELIMINARY REMARKS

1.1 Introduction

The objective of this chapter is to set out the fundamental issues which must be considered to assess the institutional character of money, so that both the goals and the boundaries of the thesis are clearly stated. As a preliminary and essential step, however, some definitions and clarifications are in order. First of all, it is necessary to point out that the term institutions will be used here in the sense proposed by Giddens (1984: 24); i.e. as social practices involving rules and resources which, existing across a large extension of time and space, reproduce the structural properties of social systems. From this perspective, money is an institution because it provides some of the necessary conditions for the material reproduction of modern capitalist economies.

The assessment of this role of money requires, therefore, the clarification of what is involved in the economic reproduction of capitalist economies. From the point of view of society as a whole, reproduction can only be attained through the continuous creation of productive wealth; i.e. through the productive use of the resources of the economy for the creation of goods (stocks, equipments and finished output) and the generation of income (wages and profits). In this sense, the creation of wealth has a social character. However, for those who command both the financial and the productive resources of the economy, reproduction is primarily a mechanism for generating profits, whether it is associated with the productive use of the resources or not. In this sense, the creation of wealth is a strictly private process, which may or may not be compatible with the social character of wealth. As a consequence, the reproduction of capitalist economies as a societal
totality depends on the existence of mechanisms to reconcile private and social interests, so that the two dimensions of wealth (private and social) can be unified. The concept of social cohesion, which will serve as the organizing principle of this thesis, denotes the confluence of private and social aims, in which private and social wealth are simultaneously generated through the same process.

To achieve social cohesion, it is imperative to build and sustain the conditions necessary for the stable operation of the productive sphere. This is so because only the productive dimension of wealth is capable of encapsulating the diverse interests present in capitalist economies, such that profits are generated through the operation of the productive circuit. The creation of wealth assumes, then, a single connotation: it refers solely to its productive dimension, the one that exists not only for the private producer but also for the society as a whole. Moreover, as production evolves through contractual relations, the attainment of social cohesion depends on the stable operation of the mechanisms which allow the establishment of contractual relations between private producers, on the one hand, and input suppliers and workers, on the other. In sum, as capitalist economies are reproduced through the continuous creation of productive wealth, it is in relation to the ultimate necessary conditions for activating the productive sphere that the vital role of money must be assessed.

The central argument of this thesis is that the basic requirements for the existence of social cohesion in capitalist economies can only be fulfilled through both the emergence and maintenance of money as a social institution. As such, money allows the existence of a social space - the space of contractual relations - in which distinct and sometimes antagonistic interests can be brought to a common ground. Thus, by being
the crucial institution around which the intricate mechanisms employed for generating productive wealth are unified, money emerges as one of the basic social operators in capitalist economies. Put another way, because money provides producers with the elements necessary to undertake contracts in an organized form, it creates a social space in which the distinct interests involved in the generation of wealth can confront each other without disrupting the social framework.¹

Although the concept of social cohesion defined above refers primarily to the economic dimension of capitalist reproduction, it has clear connections with other aspects of that process. As the confluence of individual interests and social needs through the activation of the productive sphere promotes the inclusion of individuals into the monetary circuit and gives them access to goods and services which, in modern capitalist economies, are only available for those who participate in that circuit, one can say that social cohesion also promotes the enfranchisement of social groups which do not command the productive resources of the economy. However, that inclusion also establishes more or less rigid boundaries for the ways the individuals may reproduce their place in the productive circuit. That is, it reproduces the unequal social structure which defines the capitalist system. Finally, as a corollary, one can also argue that the absence of social cohesion refers to a situation of disfranchisement of those social groups.

At this point three disclaimers apply. Firstly, it is important to note that social cohesion does not correspond to the traditional concept of equilibrium. Social cohesion neither presupposes nor requires

¹ The discussion will be centred mainly around the requirements for the producers (either private or public firms) to establish contracts because, by commanding the bulk of both the productive and financial resources of the economy, only the producers can decide for the activation of the sphere of production.
maximization of profits and preferences; it describes a much less restricted situation. Secondly, it does not imply the abolition of the exploitative character present in the capitalistic productive process, which is intrinsic to the reproduction of capitalist economies. Thirdly, it does not represent the conditions sufficient to activate capitalist production. Rather, the existence of social cohesion refers simply to the existence of the more basic conditions under which it is possible to generate capitalist wealth through the productive circuit, thereby reproducing the material conditions for the maintenance of the capitalist system as such. In other words, social cohesion refers to a situation in which the generation of private wealth (profits) and the increase of social wealth (production and income) can be made compatible. Whether these conditions of existence will motivate the actual use of productive resources depends, on the one hand, on the expectations of the agents who command those resources concerning prospective gains from their use and, on the other hand, on the existence of financial institutions adequate to activate those agents’ plans. Thus, although the role of money as an element of social cohesion is to provide some of the basic necessary conditions to integrate individuals into the monetary circuit, those conditions alone are no guarantee that such integration will be achieved. Conversely, the non-inclusion of individuals in (or their exclusion from) the productive sphere does not necessarily take away from money its potential capacity to act as an element of social cohesion.  

In order to highlight the major points to be developed and establish their relevance, it will be useful, by contrast, to consider the

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2 However, as will be shown in the second part of this thesis, the exclusion of individuals from the monetary circuit may, under certain circumstances, undermine the capacity of money to act as a social institution.
conditions, within the theoretical constructs of the neoclassical tradition, regarded as necessary for guaranteeing the generation of wealth in market economies. Such a step (section 1.2) is justifiable on the grounds that this tradition adopts a point of view entirely opposite from the one to be presented here — indeed there is complete incompatibility between those conditions and the existence of money itself. The identification of the basic theoretical assumptions which deny money any relevance for the creation of wealth in market economies will indicate the need for the definition of some methodological and theoretical guidelines within which the current work must be developed.

Following this analysis, the Post Keynesian view concerning the generation of wealth in capitalist economies is introduced (section 1.3). The reason for this move is that, as opposed to the neoclassical tradition, the Post Keynesian approach explicitly proposes a monetary theory of production, in which money is at the very core of the process of material reproduction of the economy. At the base of the difference between these two approaches are, as will be discussed, antagonistic assumptions concerning the operation of capitalist economies. Despite some important points of intersection between the Post Keynesian analysis and the approach to be developed here, the limits to their similarities as well as the need to go further in the analysis of the monetary character of the contractual relations are pointed out. As a result of this discussion, the main purpose and the theoretical relevance of this thesis will be reinforced.

1.2 Real Analysis versus Monetary Analysis

Most of the neoclassical theoretical constructs address the question of the conditions for creating wealth in market economies using — even if implicitly — a General Equilibrium model (Hahn, 1981: 123). Despite the
alleged soundness of the theoretical foundations of that model, a central problem is acknowledged: their incapability for dealing with real-world economies. According to Hahn (ibid.: 126, emphasis added),

General Equilibrium Theory is an abstract answer to an abstract and important question: Can a decentralized economy relying only on price signals for market information be orderly? The answer of General Equilibrium Theory is clear and definitive: One can describe such an economy with these properties. But this of course does not mean that any actual economy has been described.

The reasons for this incapability are to be found in the very restrictive conditions required for the existence of equilibrium in the General Equilibrium system. Hahn (ibid.: 125) describes equilibrium in this system as a state in which the independently taken decisions of the agents (either firms or households) are made perfectly complementary; i.e. as a state in which "there is a profit maximization choice of firms and a preference maximization choice of households such that the total demand for any good is equal to the amount of it initially available, plus the amount of it produced'. Through this equivalence of desires, wealth would be both created and exchanged and the reproduction of the economy assured. Accordingly, the achievement of such a state of equilibrium requires, first, the establishment of a particular set of relative prices for all the commodities of the economy.

This restrictive requirement imposes the adoption of certain assumptions, the most fundamental of which is the existence of a price for each commodity at each possible date and location of delivery and in each possible contingency. As a direct consequence of this assumption, the future is collapsed into the present, thereby removing any uncertainty away from the environment in which decisions are taken (ibid.: 124). Provided
these contingent markets exist, the independent agents can confront their endowments and preferences with each other's and, through a process of tâtonnement and recontract organized by an "auctioneer", find a set of equilibrium prices. Accordingly, there is no trading process in General Equilibrium models, as the exchanges between agents are only undertaken when the set of relative prices that provides a position of equilibrium is found by the "auctioneer"; in other words, as "all exchanges and production decisions are pre-reconciled before trade commences" (Rogers, 1989: 46), they can be undertaken simultaneously in a timeless world.\(^3\) Moreover, as the prices of each commodity at each date and location and at each contingency are previously defined, there is no actual choice to be taken in such a world, for the future is already known.\(^4\)

Therefore, the models based on the General Equilibrium framework assume, on the one hand, the existence of all intertemporal contingent markets, and, on the other hand, the fact that each private agent seeks the maximization of profits and preferences according to individually defined criteria. The conjunction of these assumptions gives firms and households the elements for making transactions among themselves so that a position of equilibrium can be reached. In such a framework each commodity can be

\(^3\) As Shackle (1988c: 152) puts it, General Equilibrium "consists of actions all chosen at the same time. What of actions to be chosen in time-to-come? There must be no such actions. In order to have a general equilibrium, time-to-come must be abolished. The general equilibrium, where every person's action springs from fully informed reason, can exist only in a timeless world, a world of a single moment with no future". Furthermore, as Hodgson (1988: 18) asserts, "general equilibrium theory regards the economy basically as a system of exchange, governing the allocation of resources between autonomous agents. Production is an exogenous 'black box', with processes governing individual tastes and preferences as a theoretical void".

\(^4\) "If knowledge is perfect, and the logic of choice complete and compelling, then choice disappears; nothing is left but stimulus and response. ... If choice is real, the future cannot be certain; if the future is certain, there can be no choice" (Loasby, 1976: 5).
exchanged for another at any date, location and in each contingency, with no need for money. As Hahn (1982: 34) asserts,

the objectives of agents that determine their actions and plans do not depend on any nominal magnitudes. Agents care only about 'real' things, such as goods (properly dated and distinguished by states of nature), leisure and effort. We know this as the axiom of the absence of money illusion, which it seems impossible to abandon in any sensible analysis.\footnote{Similarly, Hahn (1984b: 158) affirms that "... [i]f transaction dates are unessential then the description of the economy is not altered by concentrating all transactions at the first date. Accordingly in such an economy money is \textit{unessential} in the sense that no monetary variable need enter into the description, or determination, of that economy's equilibrium".}

It is exactly the incapability of this theoretical construction to find room for money that makes General Equilibrium Theory incapable of explaining the functioning of a real-world monetary economy. As acknowledged by Hahn (ibid.: 1-2),

The most serious challenge that the existence of money poses to the theorist is this: the best developed model of the economy cannot find room for it. The best developed model of the economy is, of course, the Arrow-Debreu version of a Walrasian general equilibrium. ... [O]ne is certainly in danger of making mistakes if one simply applies results from Arrow-Debreu analysis to a monetary economy.

In order to make sense of money \textit{and} to maintain the rigour of the assumptions of General Equilibrium Theory, some authors attempt to find a role for money in their models. Patinkin (1956), for example, argues that although knowing the set of equilibrium prices which reconciles their trading plans, the agents would have a demand function for money due to the alleged "uncertainty" concerning the \textit{timing} of receipts and payments associated with their transactions. Thus, "in order to have some means of
meeting these discrepancies— and thereby to have some protection against the embarrassment from default" (ibid.: 17), the agents would be motivated to hold money even after the moment all transactions have been established (in Patinkin's model, all transactions are established on each Monday morning and discharged over the week). However, it is important to note that what Patinkin calls uncertainty over the timing of sales and purchases involves just a risky, "statistically predictable timing of payments" (Davidson, 1982: 64),⁶ which seriously contradicts Patinkin's reasoning for holding money over time. As Davidson (ibid.) points out,

Patinkin's solution via a stochastic payments process still need not generate a demand for money by the public during the marketing week. Since the actual hour of payment is statistically determinable in Patinkin's scheme, the risk of default is insurable and all economic agents could buy and pay for insurance against default 'on the spot' on Monday morning. Hence, in equilibrium, all Monday morning markets (including the insurance markets) will clear. The public can make all payments spot so that no money need be demanded by the public for payments during the rest of the marketing week.

As a consequence, the General Equilibrium theorists "reach the rather displeasing conclusion ... that the Patinkin model always contains a 'non-monetary' solution" (Hahn, 1984a: 150). Thus, Patinkin's attempt to give money a store-of-value function in a timeless world is flawed simply because of the non-essentiality of storing value in such a world.

Clower (1971: 16), in turn, affirms that the failure of General Equilibrium Theory to deal with monetary economies is due to its conception of market exchanges, which "precludes assignment of a specialized role to any single commodity as a means of payment, for its logic implies that any

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⁶Following Frank Knight's distinction, Chick (1983: 214) asserts that "risk pertains to what is in principle insurable — it can be described by a probability distribution — and uncertainty is whatever falls outside such a description".
good may be traded directly for any other good, which is to say that all commodities are perfect substitutes as means of payment." But "an economy that admits of this possibility clearly constitutes what any classical economist would regard as a barter rather than a money economy" (Clower, 1969b: 205). On the contrary, in monetary economies "goods buy money, and money buys goods - but goods do not buy goods in any organized market" (Clower, 1969a: 13-4). Thus, in order to find a role for money within the General Equilibrium framework, most of the commodities must be denied a potential or actual role as a medium of exchange, money being thereby defined as the limited set of commodities that serve as a medium of exchange in organized markets.® This monetary constraint is justified on the grounds of "efficiency" and reduction in trading costs brought about by the use of money in market economies, thereby creating a demand for money for purposes of exchange (Clower, 1971: 21).§ As a result of this reasoning, Clower intends to transform the moneyless world of General Equilibrium Theory into a monetary economy.

It is important to note that Clower uses the expressions "means of payment" and "medium of exchange" as if they possessed the same and only meaning. However, as Shackle (1971: 32) points out, payment is made only when the creditor has no further claim against the debtor: "Payment is in some sense final". The exchange, in turn, is a procedure that allows a sale to proceed, even if a further claim still remains. Therefore, "the functional definition of money as 'a means of payment' is different from, and narrower than, the concept of an asset as a 'medium of exchange'" (Goodhart, 1989: 26). Although Clower uses both functional definitions interchangeably, he is clearly defining money in the broader sense of medium of exchange.

"A commodity is regarded as money for our purposes if and only if it can be traded directly for all other commodities in the economy. Correspondingly, a money economy is one in which not all commodities are money" (Clower, 1969b: 207).

"Here it will suffice to suppose, albeit arbitrarily, that a 'quantum jump' in trading costs separates monetary from other systems of trade so that the mere existence of organized markets for monetary exchange effectively ensures that other possible modes are never utilized" (Clower, 1971: 20).
Despite Clower's efforts, money once again is not fully integrated into the General Equilibrium framework. It is an add-on which is defended because of some alleged properties of money (durability, divisibility, etc.) which would lower the costs of trading. The problem with this construction, as Ostroy (1992: 784) argues, is that these attributes "merely describe the desirable features of a common medium of exchange that has already been adopted rather than provide an explanation of why the adoption should take place". The impossibility of explaining the adoption of a medium of exchange in the General Equilibrium models is due to the fact that such models are, in their essence, models of perfect barter, which simply do not need money (Rogers, 1989: 46).

Therefore, neither Patinkin's defence of the use of money as a store of value nor Clower's attempt to show the distinctive role of money as a medium of exchange are capable of integrating money purposefully into the General Equilibrium framework; in fact, there is a trade-off between integrating real and monetary forces and adopting the General Equilibrium assumptions. Put in another way, both Patinkin's and Clower's attempts to integrate real and monetary forces within the General Equilibrium framework (and all the others which followed their leadership) have failed because their models are built upon a notion of equilibrium that requires the pre-reconciliation of choice in real terms, in which money (whatever its proposed function) is an "unessential addition" (ibid.: 5).^10

As opposed to Patinkin and Clower, Hicks (1946: 58-9) perceives such incompatibility and explicitly assumes that the integrity of the timeless General Equilibrium models can only be maintained if a real commodity with non-monetary utility is taken as the standard of value, so that the demand

^10 For more comprehensive accounts of these failed attempts, see Davidson (1982: 58-78), Hahn (1984a; 1984b), Grandmont (1983: 8-47) and Ostroy (1992).
for "money" in those models is based only on the intrinsic properties of the chosen commodity. This is so because, as Chick (1987: 4) points out, "[i]f paper money served as numeraire, the demand for it at the end of a period with no future would always have to be zero". By taking the opposite route, Hicks's proposal "gives a legitimate demand for 'money' (the numeraire commodity)" (ibid.: 5) and avoids the inconsistencies of those who attempt to force real-world paper money into General Equilibrium systems. However, even if saving the formal coherence of those models, Hicks (1982b: 35) has to admit that, in contrast to his formulations, in real-world monetary economies money is always demanded as money and not for any of its intrinsic physical attributes. Thus, as the demand for money as money cannot be explained in terms of the General Equilibrium framework, monetary theory "falls outside equilibrium theory".

This separation is echoed by Hahn (1984b: 160), who affirms that "there is nothing we can say about the equilibrium of an economy with money which we cannot also say about the equilibrium of a non-monetary economy". Therefore, although money can be added to a General Equilibrium framework, "such step is unnecessary because none of the perfect barter results are thereby altered" (Rogers, 1989: 59). Accordingly, the fundamental contradiction of the neoclassical monetary theories is to be built upon a theoretical framework in which money is not needed at all;¹¹ these theories are not capable of describing monetary economies, but only real ones which can have their real magnitudes measured in nominal terms without altering any of their basic determinations. As a consequence of their fundamental and restrictive assumptions, money is only a veil and does not

¹¹ The introduction of the Rational Expectations hypothesis in neo-Walrasian models just highlights the non-monetary properties of these models, which are "inherent in the structure of the theory itself, irrespective of any treatment of expectations which may be imposed on that structure" (Rogers, 1989: 50).
really matter for understanding the real economy. From this perspective, one can classify these theories as belonging to what Schumpeter (1954: 277-8) labelled "Real Analysis":

Real Analysis proceeds from the principle that all the essential phenomena of economic life are capable of being described in terms of goods and services, of decisions about them, and of relations between them. Money enters the picture only in the modest role of a technical device that has been adopted in order to facilitate transactions ... So long as it functions normally, it does not affect the economic process, which behaves in the same way as it would in a barter economy; this is essentially what the concept of Neutral Money implies.

Also, as it is not possible to integrate money into the theoretical framework of the "Real Analysis" approaches in an essential way, they cannot provide an explanation for the process of wealth creation in real-world monetary economies. Instead, to integrate real and monetary factors in an essential way it is necessary to move towards what Schumpeter (ibid.) called "Monetary Analysis":

Monetary Analysis introduces the element of money on the very ground floor of our analytic structure and abandons the idea that all essential features of our economic life can be represented by a barter-economy model.

Thus, it is within the tradition of Monetary Analysis that this thesis intends to move in order to demonstrate why and how money is the essential element which allows the existence of social cohesion in market-oriented economies; i.e. in order to demonstrate both the monetary nature of the market economy and the conditions for its existing as such.

1.3 Elements for a Monetary Analysis

It was Keynes who better captured the importance of developing a
Monetary Analysis to understand the functioning of capitalist economies. Although this essential aspect of his work has been obscured by misguided interpretations over decades, it has been both reclaimed and highlighted by the strengthening of the Post Keynesian approach.\textsuperscript{12} According to Keynes (1973b: 408), one cannot depict a capitalist economy as one of real exchange - as the neoclassical theories do - which uses money "merely as a neutral link between transactions in real things and real assets and does not allow it to enter into motives or decisions ...". Instead, Keynes (ibid.: 408-9) insisted that in real-world capitalism, money plays a part of its own and affects motives and decisions and is, in short, one of the operative factors in the situation, so that the course of the events cannot be predicted, either in the long period or in the short, without a knowledge of the behaviour of money between the first state and the last. And it is this which we ought to mean when we speak of a \textit{monetary economy}.

For Keynes, the incapacity of the Real Analysis tradition to integrate money in an essential way rests fundamentally upon the fact that it models an economic system which does not essentially differ from one of barter. Therefore, to move from the Real Analysis tradition to the Monetary Analysis tradition implies the adoption of an altogether distinct conception of the basic characteristics of the operation of capitalist economies. As Rogers (1989: 167) points out,

\textit{It is the existence of capitalist production that is a necessary condition for Monetary Analysis and not simply the existence of money \textit{per se}. As we have seen, money can be added in a non-essential way to neoclassical models to produce the

\textsuperscript{12} For recent developments of Keynes's ideas which, although diverging in emphasis and purpose, are faithful to that essential dimension of his work, see, among others, Minsky (1975, 1986), Davidson (1978, 1982), Chick (1983), Rogers (1988) and Carvalho (1992).
neutral money theories characteristic of Real Analysis. Acknowledging the properties of capitalist production avoids the neutral money route and allows for the integration of persistent real and monetary forces.

To acknowledge such properties, however, implies abandoning the assumptions of the Real Analysis tradition which violate essential characteristics of capitalist economies. Obviously, this need does not emerge because the Real Analysis tradition is "too" abstract to serve as a description of the basic features of capitalist economies, for "[all] theory is abstraction. To reject some conception on the ground that it is abstract is to reject theory itself" (Shackle, 1988b: 10). The problem, as Shackle (ibid.) argues, is that

To abstract is to leave out, to exclude from study everything except the abstracted ideas. The need to abandon a theory will grow more pressing, the more acutely we are made aware of the extent, the influence and momentousness of what the theory leaves out. What, then, does the theory of perfect general pre-reconciliation leave out? It leaves out time.

Thus, the major assumption which should be removed, if the way money "plays a part of its own" in capitalist economies is to be understood, is that related to the timelessness of the Real Analysis tradition, i.e. the assumption which claims the existence of intertemporal markets for all commodities in all contingencies. This is the central assumption which allows the pre-reconciliation of choices in real terms, thereby denying any essential role to be played by money in the process of creation of wealth and allowing no outcome out of market relations but the equilibrium. This assumption must be removed not because it is unrealistic, for any theoretical construction assumes, to some variable extent, unrealistic assumptions; it must be removed because it implies that the passage of time
is a *negligible* factor for understanding the wealth-generating process in capitalist economies.\(^{13}\)

In other words, as it is through this assumption that the Real Analysis tradition leaves *time* out of its models, a theory of capitalist production within the Monetary Analysis tradition should demonstrate why the existence of those intertemporal markets is not compatible with some of the more basic features of the system itself. Or, alternatively, it should demonstrate why the passage of time is not a negligible factor when the phenomenon under investigation is the generation of productive wealth in capitalist economies. In this vein, Keynes and the Post Keynesians identify the crucial theoretical difference between Real and Monetary Analyses as grounded on the way the issue of time is assessed. To understand how money affects "the course of events" it is necessary to show how the productive process in capitalist economies is immersed in time and what are the consequences of such immersion for the operation of the productive circuit.

The creation of wealth in a market economy is determined by decentralized and independent producers who command the productive resources of the economy. Only those agents can decide about the degree of utilization of the productive capacity of the economy.\(^{14}\) To produce commodities - given the stock of capital - the producers hire workers and

\(^{13}\) For the distinction between unrealistic and negligible assumptions, see Hodgson (1988: 32-3).

\(^{14}\) This statement does not mean an adherence to the "methodological individualism" principle. Although the economic events are the outcome of the decisions of the "relevant" agents (i.e. those who have the power of command over the productive resources), such decisions cannot be explained only in individual terms. In other words, individual purpose is not a "sufficient cause of all social action" (Hodgson, 1988: 59). Instead, there exists a complex web of formal and informal institutions influencing and moulding these purposes (ibid.: 62), money being - as will be argued in the following chapters - one of the most important of these institutions.
acquire raw materials through the establishment of monetary contracts with both workers and input-suppliers, hence putting the productive process in motion. The output that results from production plus the stock of commodities inherited from the past are then sold in a specific market also through the establishment of monetary contracts between private agents (Keynes, 1979: 77). This process generates income, thereby allowing the producers both to pay workers and input-suppliers and to accumulate a surplus.\(^{15}\)

These basic procedures, however, do not all occur simultaneously, for any productive process takes time to materialize; i.e. time elapses "between the incurring of costs by the producer (with the consumer in view) and the purchase of the output by the ultimate consumer" (Keynes, 1973a: 46). As a consequence, in the beginning of a production period,\(^{16}\) each individual producer defines the amount to be produced taking into account his "expectations as to the costs of output on various possible scales and expectations as to the sale-proceeds of this output" (ibid.: 47), deciding on the level of output at which his expectation of profits will be maximised (ibid.: 25).\(^{17}\)

The need to form expectations concerning the costs of production in a world in which time moves unidirectionally can be avoided if the

\(^{15}\) Although oversimplified here (even implicitly assuming that producers finance themselves), this elementary description of the process of generating wealth in capitalist economies highlights the obvious – but not trivial – fact that, through the productive circuit, private and social economic pursuits can be made compatible; i.e. that it is possible to achieve social cohesion (as previously defined) in capitalist economies.

\(^{16}\) Keynes (1979: 88) defines the production period as the "time which elapses between the decision to employ labour in conjunction with capital equipment to produce output and the output being 'finished'...".

\(^{17}\) In Keynes's work, the notion of profit maximisation has a different meaning from that which the term conveys in neoclassical models, given both its ex-ante character and the absence of any recontracting mechanism.
producers enter into forward contracts with both input suppliers and workers. Through these contracts the terms and the timing of most of the transactions involving costs are defined from the beginning of the production period, thereby reducing the number of unknown variables with which the producers have to deal. There is no way, however, of avoiding the fact that it is only at the gestation date — i.e. at the end of the production period — that the output can be sold in a specific market, thereby generating the sales revenue with which both input suppliers and workers are paid. Consequently, the producers have to commit themselves to pay the monetary costs of production in the future before knowing the monetary value of the sales of the commodities produced.

Thus, in order to put the productive circuit in motion, the entrepreneurs must form expectations concerning the value of their sales in the future. Although forward contracts can cancel (or at least reduce) the uncertainty as to the costs of production, there is no such device to eliminate the uncertainty associated with the total sales revenue. Only if the producers expect the future demand for their output (i.e. the demand for the end-product at the date it will be ready to be marketed) to be high enough to pay off their contractual commitments and to generate a surplus will they feel encouraged to initiate the production process; otherwise, they will tend to reduce their commitments to avoid bankruptcy, thereby curtailing the wealth-generating process. The problem is that the entrepreneurs do not know how these markets will behave in the future. They

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18 It is important to distinguish between "made to order" and "off the shelves" goods, for the degree of uncertainty associated with sales revenue is lower to the former category of goods than to the latter. Accordingly, the larger the proportion of "made to order" goods in the total of goods produced, the less uncertain the expected value of the total sales revenue. Nevertheless, uncertainty is not eliminated even in the extreme case in which all goods are produced to order, for there is always the risk of rupture of contracts (e.g. because of bankruptcy of the buyer).
do not know this simply because the demand for the goods to be produced
does not yet exist when the decisions must be undertaken, thereby
precluding the producers from any market signal (Kregel, 1980: 38).

By stressing the radical uncertainty concerning the future outcomes
of economic activities, Keynes (1973c: 115) showed that the future
cannot be collapsed into the present, for the future is the outcome of the
interplay between decentralized and independent decisions taken in time-to-
come. Thus, although the path of the economy springs from individually
taken decisions, it is not the direct result of these decisions, being
rather the result of their interdependence over time. As a consequence, and
in contrast to risk, uncertainty is not insurable.

It does not mean, however, that production decisions are taken in a
void, giving place to a nihilistic pattern of behaviour. Instead, the need
to make decisions in an environment of radical uncertainty compels
producers to adopt a defensive behaviour. This behaviour is based on the
fact that, in the absence of knowledge, there is no better strategy for
each individual agent than to "take the existing situation and to project
it into the future, modified only to the extent that we have more or less
definite reasons for expecting a change" (Keynes, 1973a: 148). The reason
for such behaviour is that, as Keynes (ibid.: 51) argues,

It would be too complicated to work out the expectations de novo whenever a productive process was being started; and it
would, moreover, be a waste of time since a large part of the
circumstances usually continue substantially unchanged from
one day to the next. ... [Thus] producers' forecasts are more
often gradually modified in the light of results than in

19 "The sense in which I am using the term [uncertainty] is that in
which the prospect of a European war is uncertain, or the price of copper
and the rate of interest twenty years hence, or the obsolescence of a new
invention ... About these matters there is no scientific basis on which to
form any calculable probability whatever. We simply do not know" (Keynes,
anticipation of prospective changes.

Therefore, the current expectations of prospective sale proceeds are made in the light of the actually realised results of the sale of output (ibid.: 47), which means that "the process of revision of short-term expectations is a gradual and continuous one" (ibid.: 50). Accordingly, if expectations are frustrated at the end of a production period (through variations in stocks), expectations to be formed in the beginning of the next period will be adjusted to allow for these results. Thus, through this process of expectations revision, production decisions depend on the expected and realised sales revenue (income), the latter playing "a predominant part in determining what these expectations are" (ibid.: 51).

The adoption of this conventional behaviour provides producers with guidelines for making decisions in an environment of uncertainty. However, as Keynes (ibid.: 152) asserts, this "does not mean that we really believe that the existing state of affairs will continue indefinitely". In other words, one cannot automatically and deterministically associate the expectations concerning the future state of a specific market with its past and present conditions, as if the future were the mere reproduction of the past. That is the reason why it is important to allow for the "state of confidence" held on conventional expectations formed under conditions of uncertainty, which is an expression of "how highly we rate the likelihood

20 Keynes (1973a: 47) labels the expectations about the results of production decisions short-term expectations. In contrast, expectations concerning the outcomes of investment decisions are named long-term expectations. This distinction refers not only to the different time-horizon associated with each of those decisions but also to their different degrees of irreversibility. However, although the short and long terms can be neatly separated as to the ambit of the decisions taken, it is important to emphasize that both are equally immersed in radical uncertainty. They only differ as to the degree of uncertainty, not as to the nature of uncertainty. As Possas (1989: 171) argues, there is no reason to consider that the world is non-ergodic only in the long term.
of our best forecast turning out quite wrong" (ibid.: 148). However, as uncertainty about the future is irreducible, the state of confidence is inherently fragile, such fragility being proportional to the degree of uncertainty present in the formed expectations (Possas, 1986: 305). Conventional behaviour, therefore, "being based on so flimsy a foundation ... is subject to sudden and violent changes" (Keynes, 1973c: 114).

It is in this context of radical uncertainty - and of potential volatility of the conventional behaviour - that Keynes demonstrates how money is intrinsically linked to the wealth-generating process. If, for whatever reason, confidence in the continuity of the conventional behaviour is weakened, the risks involved in the productive process are increased and producers "tend to curtail their contractual commitments to hire workers and produce output" (Davidson, 1991: 67). In these circumstances of doubts concerning the meaning of the signals the market emitted in the past, they prefer to store their wealth in terms of money rather than allocate their resources in the production of any physical good. This is so because the producers are only interested in conserving and increasing the command they possess over wealth in general, be it through the activation of the productive circuit or through increased control over money.21 The choice for one of these alternatives depends on the expectations associated with each of them. The weaker the confidence in the stability of the conventional expectations associated with the productive sphere, the stronger the desire to hold money as a store of value. As Keynes (1973c: 116) puts it, "our desire to hold money as a store of wealth is a barometer of the degree of our distrust of our own calculations and conventions

21 "An entrepreneur is interested, not in the amount of product, but in the amount of money which will fall to his share. He will increase his output [only] if by so doing he expects to increase his money profit even though this profit represents a smaller quantity of product than before" (Keynes, 1979: 82).
concerning the future", for, in a world without shared and trusted conventions, only the "possession of actual money lulls our disquietude" (ibid.). In this sense, the existence of money gives producers the option of waiting, of not entering into contractual commitments which are not believed to generate the desired profits.\(^{22}\)

Although only those in a "lunatic asylum" would use money as a store of wealth in the timeless world of the Real Analysis tradition, that is the more sensible and rational thing to do when the conventional basis previously used to form expectations in an environment of uncertainty is no longer trusted. Nevertheless, as a consequence of this search for protection from the unknown future, input purchases are drastically reduced or even completely aborted.

Therefore, through the acknowledgment of the unidirectional character of time in market-oriented wealth-generating processes and, consequently, of the radical uncertainty in which they are involved, Keynes is capable of demonstrating how money affects the "course of events". As opposed to General Equilibrium models, there is no difficulty in integrating money into the model which explains the generation of wealth. Such a demonstration is centred around the \textit{store-of-value} function of money, which is only intelligible in an environment of uncertainty, where the future cannot be collapsed into the present. In this sense, to take into consideration the passage of time (and consequently to abandon the General Equilibrium assumption which proposes the existence of timeless contingent

\(^{22}\) Evidently, modern capitalist economies provide entrepreneurs with several monetary and financial instruments which can perform the \textit{store-of-value} function, insofar as they can be readily converted into money at some positive but small cost (this point is discussed in section 2.4). The dichotomy between being engaged in production-related activities \textit{or} holding money is just an expository simplification, which nevertheless points out the central fact that the entrepreneurs are interested only in the valorization of their wealth, regardless of the specific form that it can assume.
markets) allows the integration of monetary and real variables in an essential way. As Shackle (1967: 93) summarizes,

It is in a world of uncertainty, one which therefore can be in a state other than that of perfectly informed rational adjustment of all acts to each other, that money gains freedom and a life of its own, and so a value of its own as the means of deferring decisions and avoiding commitments to technically specialized, hazardous types of assets.

Keynes's main message, then, is that money is not neutral: money matters. Accordingly, there is no "veil" to be removed, for the real world of goods and services is, in an indistinguishable and inseparable way, the monetary world as well. However, if to allow for the importance of time is a sufficient condition to integrate money into the world of production, an important question still remains. It refers to the reasons why money — and not any other asset — should be primarily demanded as store of value.

Keynes's (1973a: 236-7) answer to this question stresses the fact that contracts in market economies are both fixed and extinguished in terms of money, which renders money the property of being purchasing power in general. That is, although it is "uncertainty which gives to money every character and capability which distinguish it from a mere numéraire" (Shackle, 1967: 6), it is because money functions both as the standard of value in which the terms of the contracts are established and as the means of payment which discharges the contracts so established that it can be "the refuge from specialized commitment, the postponer of the need to take far-reaching decisions" (ibid.). The store-of-value function of money, then, presupposes the monetary relation: "In particular, money can be used as store of value only because it measures value and forms it into a social object" (Levine, 1985: 116).

This argument, however, prompts a further question: if money is
demanded as a store of value because contracts are both fixed and discharged in terms of money, it is necessary to explain why contracts are monetary relations. Keynes's (1973a: 237) answer emphasizes the relative stability or "stickiness" of the values expressed in terms of money, which stems, in turn, from the "special characteristics" of "the kind of money to which we are accustomed" (ibid.: 229–33): as money has zero (or negligible) elasticities both of production and substitution and has negligible carrying costs, its exchange value is not reduced as a consequence of an increase in the demand for money as a store of value. Thus, contracts tend to be both established and extinguished in terms of money because of the expected stickiness of the exchange value of money.\(^\text{23}\)

Although those properties of money reinforce each other (i.e. they are not merely additive), there is circularity in the argument: on the one hand, money is demanded as store of value because contracts are commonly monetary relations; on the other hand, the monetary character of contractual relations is an expression of the expected stability of the monetary values, which depends, in turn, on the characteristics of money as a store of value. Even if this circularity does not make the argument less true (Chick, 1983: 306), it implies taking the monetary character of the contractual relations in market economies for granted, thereby concealing the crucial fact that, being both the standard of value and the means of payment, money is more than a mere numéraire or a facilitator of

\(^{23}\) Moreover, the effective realization of monetary engagements reinforces, in its own way, the belief in the stability of the future value of monetary wealth. This point is made by Lerner (1952: 192) as follows: "The usefulness of money depends intimately on a certain degree of stability in its purchasing power. This stability encourages the making of contracts and the development of other institutions that help to establish a rigidity of the general price level. The rigidity in turn gives further stability to the purchasing power of money so that its position in the economy reinforces itself in the mould of custom".
exchanges.\textsuperscript{24}

Thus, to assess the breadth of the role played by money in wealth-generating processes it is necessary to break that circularity and demonstrate the monetary nature of contractual relations. That is the only route for fully understanding the reasons why contracts are monetary (and not real) and to assume the radicality of the concept of Monetary Analysis as proposed by Schumpeter (1954: 277), in which money enters "on the very ground floor" of the analytical structure. Only from this starting point can the functions of money be integrated purposefully and money understood as the social operator which provides the more basic conditions required by entrepreneurs to put the world of production in motion, so that private wealth (profits) and social wealth (production and income) can be created through the same process. Because money acts as such an operator, it will be claimed that money is on the top of the institutional apparatus on which the reproduction of capitalist economies depends. Moreover, besides demonstrating the monetary nature of contractual relations whereby the institutional character of money emerges, the consistency of the present approach will also require the elucidation of the conditions necessary to preserve money as an element of social cohesion.

\textsuperscript{24} As Chick (1978: 42–3) points out, "Keynes's main concern in his discussion of money ... is to explain not the origin but the continued use of money, taking the existing monetary framework as given".
CHAPTER 2. CONTRACTS AND THE FUNCTIONS OF MONEY

2.1 Introduction

Modern money is conventionally defined by the three mains functions it performs in capitalist economies: to act as a standard of value, as a means of payment and as a store of value. From the preceding discussion, it is reasonable to argue that the neoclassical and the Post Keynesian traditions are representatives of two radically opposite approaches regarding the importance of the functions of money for the operation of the productive process (Real Analysis and Monetary Analysis). Whereas neoclassical models cannot find any essential function for money, Post Keynesian models demonstrate its essentiality. The main reason for this striking divergence is the importance the latter assigns to the fact that production decisions are taken in an environment of radical uncertainty about their future results. This is a sufficient condition to give at least one essential role for money to play: to serve as store of value whenever trust in the conventions which rule production decisions is weakened. As a consequence, money assumes crucial importance to determine the extent to which the productive sphere will be activated.

However, as Post Keynesian analysis presupposes the monetary character of contractual relations it cannot reveal the importance of money as the provider of the necessary conditions to activate the productive sphere. To unveil such a role requires not only the abandonment of the "axiom of reals" (Minsky, 1984: 454) and the simultaneous introduction of monetary contracts as the basic institution upon which the process of generating wealth in capitalist economies evolves. Despite the importance of this shift to make sense of money as a store of value, it is also vitally necessary to explain why the "axiom of reals" must be removed, such
that the essentiality of the monetary relation is elucidated. Thus, instead of simply postulating money as the "only economic link" between independent agents (Cartelier, 1985: 76. Translated by this author), this thesis aims to explain why such a central role is played by money in modern capitalist economies and what are the necessary conditions to conserve money in that pivotal position. It is only through the elucidation of the monetary character of contractual relations that the role of money as a social institution can be made intelligible. To do so this chapter will demonstrate how the main functions of money (standard of value, means of payment and store of value) are, each in a particular way, essential for the establishment of contracts in modern capitalist economies (sections 2.2 to 2.4). Only by following that route, which starts with the contractual relation as the basic element of analysis of the wealth-generating process, can the importance of those functions be understood in an integrated way, so that the most crucial and encompassing role of money as an element of social cohesion in those economies may emerge. Thus, although the subject of this thesis is fully compatible with the Post Keynesian approach, it intends to deal with what the latter takes for granted. Conversely, by demonstrating how money acts as a social institution in modern capitalist economies, this thesis completely departs from the neoclassical tradition, which cannot find an essential role for money without violating its methodological assumptions.

2.2 Money as a Standard of Value

Contractual relations can only occur if the private values of the commodities exchanged (e.g. raw materials and labour) are given a social expression; i.e. if whatever the use value a specific commodity possesses for its owner there is social agreement about its exchange value. As a
consequence, contractual relations presuppose the existence of a widely accepted standard of value, a common language in which "complex magnitudes" — by their own nature non-numerical magnitudes — are given a numerical expression (Carabelli, 1992: 23). Several concurrent theoretical approaches have attempted to provide a consistent explanation for the determination of the values of commodities in market economies. Despite their dissimilarities, however, there is a common feature which unifies most of these theoretical constructions: although exchange values are expressed as monetary magnitudes, they maintain that it is in the realm of the real relations that exchange values are defined. At their best, money is relegated to perform the role of sanctioner of the values previously established in real terms, thereby giving them their definitive and social form.

This section aims at both examining this separation and endorsing an alternative approach, in which the values of the commodities are directly established in terms of money. By so doing, it intends to demonstrate the monetary nature of contractual relations in capitalist economies, so that the cruciality of the standard-of-value function of money as the provider of one of the necessary conditions for the activation of the productive sphere be highlighted. In other words, the objective of this section is to emphasize the fact that only money can both define and express contractual values in socially intelligible terms.

2.2.1 Theories of Value and Real Analysis

The establishment of contractual values in market economies has both a quantitative and a qualitative dimension, for the process of giving private commodities a numerical expression is also and simultaneously a mechanism of socialization of private values. Most of the theories of value
deny money a central role in the determination of contractual values because they subsume that qualitative dimension under the quantitative one.

This is evident, for instance, in the neoclassical tradition, in which the values of the commodities are defined through a process of tâtonnement according to individual schedules of utility associated with specific commodities. In this context, all contractual relations are defined in the individual sphere and in real terms, money being a non-essential addition to the models. Yet even outside the neoclassical field neglect with the social (qualitative) character of the exchange values dominates. For example, both the Ricardian approach and a significant part of the Marxian tradition (although not Marx's own work) propose that the exchange values of commodities are defined according to the number of hours they require to be made, in which case money is "only the medium by which the exchange is effected" (Ricardo, 1969: 194). For these approaches, "the theory of value is essentially a theory of the magnitude of the value, which is defined as the quantity of labour incorporated during the production of goods" (De Vroey, 1985: 33. Translated by this author).

All these constructions share the idea that social values spring directly from the private sphere; none of them has any role for money but "as a neutral link between transactions in real things" (Keynes, 1973b: 408). Accordingly, they are not capable of describing monetary economies, but only real ones which, for matters of simplicity or transaction costs, are measured in nominal terms. To understand why exchange values are necessarily monetary magnitudes requires, therefore, the construction of a social theory of value, in which, as Mirowski (1991: 569) says, "the notion of an independent natural metric" is refused and "[c]ommodities are rendered quantitative in the marketplace". That is, a theory of value in which private commodities are given numerical expression only through their
socialisation in the market place. It is only if that double dimension of value is so reconciled (the quantitative dimension subsumed under the qualitative one) that the pivotal role of money in the determination of values can be comprehended.

The Marxian "abstract labour" theory of value\(^1\) endeavours to promote such a conciliation through the distinction between \textit{substance} and \textit{form} of value. According to this view, the substance of value is abstract labour, which is present in all commodities regardless of their utility; that is, it is the common basis necessary to ground the commensurability of the values of the different commodities. However, and in contrast to most of the self-entitled Marxian theories of value, this approach asserts that the fact of being the result of human labour does not give commodities a social space of measurement in which their social values can be defined. In fact, it only gives them the \textit{possibility} of receiving a social valuation. The \textit{magnitude} of that substance (i.e. the quantity of abstract labour) present in each particular commodity can only be actually defined in the market place, where it assumes the form of exchange value. Put in another way, the form of value is the form whereby the substance of value (abstract labour) is socially represented and acknowledged (Mollo, 1991: 44).\(^2\) Thus,

\(^{1}\) For a classification of the distinct theories of value within the Marxian tradition, see De Vroey (1985).

\(^{2}\) "In commodity production, the labour of an individual, a single commodity producer, is not directly regulated by the society, and in itself, in its concrete form, it does not yet belong to social production. Labour only becomes social in commodity production when it assumes the characteristic of socially equated labour; the labour of every commodity producer only becomes social by virtue of the fact that his product is assimilated with the products of all the other commodity producers, and the labour of a specific individual is thus assimilated with the labour of all the other members of the society and all the other kinds of labour. There is no other characteristic for the definition of the social character of labour in commodity production. There is no previously conceived plan for the socialisation of the division of labour, and the only indication that the labour of a particular individual is included within the social system of production is the exchange of the product of a specific labour for any
although the values of the commodities are *created* in the ambit of production, they only receive a social form — the form of exchange values — in the ambit of circulation, where the values created become values *realized*. It is in the context of this theoretical framework that the monetary character of exchange value is explained: as abstract labour can only be measured and socially expressed in the form of exchange values and as these are monetary magnitudes, the values of the commodities are necessarily monetary magnitudes as well.

Although the abstract labour approach retains the double dimension of value so that the monetary character of the value is introduced, it bears — as De Vroey (1985: 39, translated by this author) asserts — an inherent paradox:

To say that abstract labour is the basis of the commensurability of the commodities implies the idea of an anterior logic, but, on the other hand, to affirm that abstract labour can only be realized through exchange implies the idea of a posterior logic! In order for a value to constitute the basis of the exchange of commodities, it is necessary that the abstract labour finds a concrete magnitude in which it can be represented and which can be susceptible of expressing quantitatively the divergence between a potential magnitude, the pretension of the abstract labour, and an effective magnitude, the realized abstract labour. To play such role, money must exist prior to the exchanges, as prefiguration of future abstract labour. Thanks to it, the transformation of private labour into social labour can operate and the theory of value receives from this ruler a complete physiognomy. In this perspective, theory of value and theory of money form a single object.

As a consequence of this paradox, the aspect "substance" of value seems to be redundant, given the central and ruling role performed by the aspect "form" of value (ibid.: 47). That is, as the values created in the process of producing commodities can only assume a socially intelligible expression other product" (Rubin, 1978: 114).
through the exchange process (in which they assume the form of monetary magnitudes), the inquiry concerning the substance of value (abstract labour) of these commodities is not indispensable for their determination.\(^3\)

In order to avoid these pitfalls of the "abstract labour" approach, other theorists opt for giving up the conciliation between the quantitative and qualitative dimensions of the exchange value. Some are explicit in proposing that the quantitative aspect of value should be totally dependent on or subsumed under the qualitative aspect, for only if the exchange values are taken primarily as an outcome of the process of socialisation of private commodities are they capable of receiving a purposeful numerical expression. And as the exchange values defined in contractual relations are always monetary relations, these are the only meaningful magnitudes to be taken into account. Therefore, what really matters for this approach is to highlight the qualitative dimension of value, for only thus is it possible to understand the constitution of social links in market economies (ibid.: 53).

For this self-entitled "heterodox" approach, then, money is the sole standard of value capable of providing social meaning to contractual relations. In this vein, Cartelier (1985) goes as far as proposing a choice between any theory of value and monetary heterodoxy, for the logical consistency of the former would ultimately rest on the exclusion of money: whereas in theories of value money is always introduced in an "arbitrary and redundant" manner, in the heterodox approach money is a "social

\(^3\)A distinct kind of criticism questions the validity of considering labour as the substance of value, for there would be a certain amount of arbitrariness in tracing the production of all commodities back to labour. As Hodgson (1988: 283) puts it, "just as labour enters into the production of goods, some goods (e.g. food, housing, etc.) enter into the production of labour". Thus, "it is no less legitimate to single out, for example, water, steel or land as the basis of value" (ibid.).
relation" (ibid.: 75) which is not even susceptible of being deduced as an economic category, for "its presupposition is the condition for elaboration of political economy" (ibid.: 69). The problem with this approach, however, is its somewhat axiomatic character, in which there is no space to explain how and why the central role of money emerges.

A less radical approach is put forward by Rotheim (1981), who, based on Keynes's analysis of the monetary nature of capitalist economies, proposes a monetary theory of value. For him, the monetary character of the theory of value derives from the characterisation of the fluctuations of effective demand — and, therefore, of the fluctuations of prices and output — as a monetary phenomenon (ibid.: 577). However, as those oscillations of effective demand are a monetary phenomenon only in the precise sense that they are the counterpart of the use of money as store of value, the reasons for using money — and not any other asset — as such are essential for Rotheim's approach. The reasons come in the form of some properties of the "thing" used both as the standard of value and as the means of payment in modern economies, such as durability and low elasticities of both production and substitution (ibid.: 579). However, while it is true that these properties permit money to act as a store of value, no explanation for the motives which make people "choose that object which best embodies these properties as its money" (ibid.) is offered. Thus, even if not as axiomatic as Cartelier's approach, Rotheim's monetary theory of value does not offer a satisfactory explanation for the monetary nature of the values either. In fact, it takes the monetary nature of contractual relations for granted, more as a refusal of the traditional theories of value than as a positive elaboration. In this context, as the objective of Aglietta and Orléan's (1990) analysis is to demonstrate why values are necessarily monetary magnitudes, it deserves a more detailed analysis.
2.2.2 The Violence of Money

Aglietta and Orléan (1990) propose an alternative approach in which the non-neutrality of money is the centrepiece. For them, exchange relations can only be carried out in market economies if money emerges as the major regulator of the process; and to explain why money performs such a central role is their endeavour. The alternative suggested by Aglietta and Orléan is two-fold. Their first aim is to understand how the quantification of the exchange relation arises necessarily out of the exchange process itself and not from any external substance which would allow the agents to measure the value of their commodities before entering into the exchange relation. Secondly, however, they do not just postulate money as the institution capable of providing a social space of measurement for these commodities. Instead, Aglietta and Orléan attempt to demonstrate why only money is capable of doing so, thereby giving consistency to the "monetary heterodoxy" proposed by Cartelier (1985). To do that, Aglietta and Orléan (1990: 31) base their approach on both Marx's theory of value and the concept of mimetism elaborated by René Girard. They claim that Marx's analysis — reinterpreted according to Girard's ideas and in contrast even with most Marxian interpretations — provides the basis of a theory of value which identifies the genesis of money with the emergence of a social institution whereby exchange values can be established. In this way, Aglietta and Orléan's construction can be labelled a social theory of value, which, as Mirowski (1991: 566) points out,

refrain[s] from grounding any aspect of value either in the 'natural' attributes of the commodities (the substance theories), or in the supposed inherent psychological

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*In this respect they are in accordance with Mirowski (1991: 568), who says that the "abstraction from the realm of the personal is an absolute prerequisite to rendering market trade quantitative".*
regularities of the individual minds (neoclassical field theory). Instead, it would opt for the third modality of rooting the structure of value in contingent social institutions.

It must be said, however, that Aglietta and Orléan's analysis does not intend to offer a historical account of the genesis of money. Instead, it aims to show the essentiality of money for the operation of market economies by demonstrating the impossibility of establishing socially accepted exchange values in a hypothetical non-monetary (barter) market economy.\(^5\)

According to Aglietta and Orléan (1990: 33), the process of exchanging commodities bears an inherent contradiction which cannot be solved in its own terms. This contradiction results from the fact that, although what really concerns the agents involved in an exchange relation is the achievement of their desires of material fulfilment, there exists no private schedule to measure the extent of the utility which they attach to a particular good. As a consequence, their desires are indeterminate and can even be infinite. Their only alternative is to try to imitate the other's desires. However, each one of the private producers is in exactly the same position of contemplating the other's desires in order to define their own. None possesses a stick to measure them in absolute terms. Therefore, the one's desire for possessing wealth in the form of commodities will also be the other's in a reflexive way: each individual trader is in a position in which he has only the ownership of his own

\(^5\) It is important to emphasize that the term "barter market economy" is being used to describe a hypothetical economy with widespread and generalized moneyless market exchange relations. Thus, neither moneyless exchanges of any other sort (e.g. gift-giving, prestations, ceremonial exchanges, etc.) nor infrequent and emergency moneyless market exchanges (e.g. during war time) are considered sufficient evidence to characterize a barter market economy (Dalton, 1982: 181).
commodities and the desire towards the other's. The basic problem that such a mimetic structure poses is the following: if there is no a priori element to define the "values" of the different commodities and therefore the comparison between these values, how can contractually established values even exist? In order to observe the kind of contradiction that emerges from this situation one must consider two independent traders - hereafter A and B - each of them owning a specific commodity and aiming at fulfilling their desires through the appropriation of the other's commodity.

For individual A, it is the possession of B's commodity that will satisfy his desire for acquiring wealth. This is so because, for A, he must imitate B, desiring what B possesses. By so doing, however, individual A denies his own commodity any use value; it is instead the commodity owned by B that is deemed as possessing use value, its ownership being capable of placating his desires. However, as it is in the interest of A to make his own commodity appealing to B, so that he can exchange his commodity for B's, he must show his commodity as desirable by itself, as possessing use value. Thus, although individual A denies his commodity any use value for himself, it is crucial for him that individual B sees A's commodity as embodying use value, as the object of his desire. In this sense, individual A claims that his own commodity has a power of command over B's commodity, which is dictated by the fact that B desires A's commodity. And A expresses this power (which can be labelled exchange value) in terms of the commodity owned by individual B, which, at this moment, is nothing but a quantitative mirror reflecting the exchange value of A's commodity. From this perspective, the amount $a_i$ of A's commodity = the amount $b_j$ of B's commodity.

B's desire, however, is only attained through the imitation of A's desire, which, from B's viewpoint, means to possess A's commodity. Thus,
similarly to A's behaviour, individual B also does not assign any use value to his commodity. For him, only A's commodity is capable of calming his desires for acquiring wealth, which would fulfil his incompleteness. However, and in analogy with A's behaviour, individual B must show his commodity as possessing use value to individual A. Thus, B also claims that his commodity has the power of being exchanged for A's commodity. He expresses the exchange value of his commodity (or the power of command he claims his commodity possesses) in terms of A's commodity, which, at this moment, has no qualitative property, except the fact of being a means whereby B can establish the exchange value of his own commodity. That is, \( b_1 \) of B's commodity = \( a_2 \) of A's commodity (ibid.: 60).

From this picture the contradiction inherent in any attempt to establish exchange values in real terms emerges. The expression of the exchange value of A's commodity in terms of B's commodity only has sense when observed from A's viewpoint, and vice versa. Depending on the pole where the relation is observed from, the other's commodity is performing nothing more than a passive role. If considered as synchronous evaluations, however, it surfaces that both agent A and agent B simultaneously accept and refuse the essential double character of the commodities: the fact that the commodities are not only the result of the human labour whereby it is possible to express the value of each commodity in terms of the other, but that the commodities are also concrete objects with different use values, being valued also as such. For each individual involved in an exchange relation carried out in real terms, his own commodity has no use value, although he claims that his commodity is so desired by the other. For each of them, the satisfaction of his desire is to be found, instead, in the possession of the other's commodity, which, for him, possesses use value. Yet to make his own commodity recognized for its use value by the other,
each individual has to make this use value intelligible to the other. This is done through the establishment of the exchange value of his commodity in terms of the other's commodity. By so doing, however, the other's commodity no longer has use value, for it is just a passive repository of value. Thus, each commodity is simultaneously attributed and refused both use value and exchange value.

According to Aglietta and Orléan, such a contradiction expresses the impossibility of reaching an agreement concerning a basis for evaluating the exchange values of the commodities, thereby causing their indeterminacy and preventing the private agents from attaining their desires. The nonexistence of a socially recognized way of measuring the exchange value of the commodities (a standard of value) implies the presence of a permanent tension between two distinct individual evaluations in any single exchange relation.\(^6\) In fact, that contradiction makes it impossible to carry out the exchange relation in stable ways in the ambit of market economies, for, in the absence of well-defined social values, the desire of each agent for the other's commodity could only be attained through its violent acquisition.\(^7\)

Although departing from less restrictive assumptions, Hicks (1967) also points out the indeterminacy of exchange values in barter transactions, thereby demonstrating the inadequacy of General Equilibrium models to understand the operation of monetary economies. To explain his

\(^6\) According to Turgot (1973: 90-100), divergences between private evaluations concerning exchange values in barter transactions could be narrowed down both through bargaining between the two "exchangers" and by adding more exchangers in the market place. However, as Hicks (1967; see below) demonstrates, even generalized barter transactions would not eliminated the indeterminacy of exchange values.

\(^7\) With regard to this aspect of their analysis, Aglietta and Orléan's book - *The Violence of Money* - is mistitled: it is barter, or isolated real exchange, which is "violent".
view, Hicks (ibid.: 8–9) considers the limiting case of a market with flexible prices in which the agents trade with each other through the establishment of credit relations. In his model, prices are expressed in terms of a given unit of account which, however, has no concrete existence as a means of payment. Hicks also supposes that, on the point of closing of the market, all debts are cleared and everyone is in balance, except for two agents: A (the debtor) and B (the creditor). In this situation, Hicks (ibid.: 9) claims that, even if there is coincidence between what B desires to purchase and the commodities A was left with, "there is nothing that will automatically prevent A from fixing an exorbitant price, so as to acquit his debt to B with what in real terms is a mere trifle". As a consequence, and in spite of the existence of price-expectations based on previous exchanges, "the absolute price-level will slip about, from one 'day' to another, in an undependable manner" (ibid.: 10).

In contrast to Aglietta and Orléan's analysis, for Hicks prices are indeterminate in barter systems not because of the violence inherent in interpersonal relations, but because of the sequential nature of market trades. It is because markets are not "self-contained in time" that, according to Hicks, General Equilibrium models cannot explain the determination of exchange values. Although coherent in itself, and not incompatible with Aglietta and Orléan's approach, Hicks's criticism of barter models lacks the strength of the former's. This is so because, whereas Hicks needs to consider generalised barter and allow time to pass to demonstrate the inconsistencies of trading without money, Aglietta and Orléan unveil those contradictions within a single trade relation and in a single instant of time, only afterwards exploring their implications for the society as a whole. The main reason for this difference between the two approaches is the fact that, whereas Aglietta and Orléan claim that prices
are indeterminate because of the absence of a socially acceptable standard of value, Hicks takes the existence of such a standard for granted. By so doing, however, he overlooks the real nature of the violence intrinsic in barter relations.

The abolition of this state of violence requires, according to Aglietta and Orléan (1990: 63), another act of violence, whereby one commodity would be expelled out of circulation and denied any other relevant qualitative value except the fact of being the commodity in terms of which the values of all other commodities would be reflected. This "mimetic polarization" around one specific commodity represents the process of creation of money as a social institution. Through this process, the violence of market relations is not extinguished but, instead of being spread among all the agents (one against each other), is concentrated on only one commodity, which is excluded from the world of use values. This commodity becomes thus the general equivalent of the wealth that all other commodities contain. In this sense, it is from the mimetic structure which

8 "The specific kind of commodity with whose natural form the equivalent form is socially interwoven now becomes the money commodity, or serves as money. It becomes its specific social function, and consequently its social monopoly, to play the part of universal equivalent within the world of commodities" (Marx, 1976: 162).

9 In this sense, the origin of money is a process whereby the abstract and the concrete dimensions of money (for the commodity in terms of which the values of the contracts are established has a concrete existence) are integrated into the form of a social institution. The choice for one asset to act as money depends either on some of its concrete attributes (e.g. durability, divisibility, etc.), as in the case of commodity-money economies, or on the emergence of a social convention, enforced by the State, based on confidence in the general acceptability of the chosen asset as money, such as in modern capitalist economies. Moreover, although commodities used as money in commodity-money economies (e.g. gold or silver) are desired also for some of its non-monetary attributes, these gradually become a subsidiary aspect of their valuation. In fact, the continuous use of a commodity as money ends up subverting the nature of that desire, so that the desire for the non-monetary qualities of an object (a jewel, for instance) made of the money-commodity is magnified only because of its general acceptability as wealth in general.
the desire for wealth assumes in market economies that one can observe both
the intrinsic violence of this kind of social organization and the way
money emerges to pacify it. In fact, it is the mimetic relation itself that
engenders the need for the establishment of a social institution (money),
so that private desires can be fulfilled without simultaneously destroying
the system.

Thus, because the expulsion of one commodity from the world of use
values allows contractual relations to be established in terms of a
socially recognized standard of value, this process inaugurates money as
a social institution. Moreover, as the creation of money allows the
confrontation of the conflicting desires of independent agents to be
mediated by an institution which gives the exchange relations a numerical
expression, it may be regarded as the decisive moment of the process of
socialization of market economies (ibid.: 64).\textsuperscript{10} In this sense, the
emergence of money as a social institution marks the generalization of
market relations as the dominant way whereby the economy is reproduced over
time. Accordingly, money is an institution primarily because it modifies
and regulates the forms whereby disagreements among the private agents are
settled, thereby allowing them to express their desires in a socially
recognized way.\textsuperscript{11} That is, money is the "common reference" of all
particular commodities, which may have their values expressed in terms of
it without menacing the stability of the social structure. Whereas all the
independent agents constitute the private space of the economy, money

\textsuperscript{10} Goux (1992: 146) points out the sacrificial character of the
exclusion of a commodity to serve as standard of value: "There is no unit,
measure, standard of evaluation, without a genetical and structural stage
of exclusion of the standard which is also the separation between one
element becoming sacred and the other profane elements".

\textsuperscript{11} As Carabelli (1992: 23–4) points out, money is the "economic
ordinary language" which allows "intersubjective, societal and economic
communication".
represents the social space whereby the distinct private evaluations of the exchange values of the commodities can be pacified. In other words, money represents the society and not any of the private agents (ibid.: 63). Although it is not capable of eliminating the constitutive violence of market economies, money is capable of regulating it.

The importance of this approach is to substantiate the monetary nature of market economies. As opposed to the axiomatic character of other "heterodox" views, it provides an explanation of the fact that it is only through the emergence of money that the contradiction between the quantitative and qualitative aspects of the exchange value is surpassed. Thus, one can understand why the market community is not founded on a problematic coherence of the private evaluations concerning the "real" value of the contracts, but rather on both the acceptance of and the trust in the conventional evaluations that monetary relations contain (ibid.: 16). The monetary nature of market economies is given by the fact that a value established in contractual relations can only be socially expressed in terms of money: because only money is capable of giving non-numerical magnitudes a numerical expression, contractual values have no social expression except in as much as and if they refer to money as a standard of value. Prices are not therefore established through individualist evaluations made in real terms as proposed in many General Equilibrium-inspired models; instead, prices are conventions socially created over historical — and not logical — time. Thus, as prices are necessarily monetary magnitudes, money operates as the social "conveyor" of those conventions. Accordingly, the role of money as a standard of value cannot be explained in terms of the methodological individualism which pervades the neoclassical tradition.

It can be seen then that contracts cannot be expressed in real terms
first and receive a nominal expression later, for contractually established exchange values are defined in monetary terms and not only measured in nominal terms (Carvalho, 1988: 7). Money is a constitutive element of market-oriented economies; it cannot be put aside so that the "real" features of these economies can be observed, first, and then reintroduced after. If one puts money aside, what remains is not the "real" economy; nothing remains. In fact, as only money is capable of giving contractual exchange relations a social meaning, organized market economies have no real existence except in monetary terms. As opposed to monetary market economies there is no such a thing as barter market economies; or, one could say, the barter market economy is the economy of the disorganization of contracts, of chaos and of violence. This explains why the standard-of-value function has precedence over the other functions of money: it is through this function that money defines a common space of measurement for the exchange values, thereby providing the first of the necessary conditions for the establishment of contracts in market economies and announcing its normative power as a social institution. 

2.3 Money as a Means of Payment

Despite the centrality of the standard-of-value function of money, monetary values are only the social expression of the values the private agents claim for their commodities or services. The actual transference of wealth that the contracts promise only occurs when contracts are discharged; i.e. "whenever a seller of a good or service, or another asset, receives something of equal value from the purchaser, which leaves the

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12 As Hicks (1989: 44) points out, "the function of money as a standard, if it is no more than a standard, is to make it possible to form a price-list, in which the values of a number of commodities are reduced to a common measure".
seller with no further claim on the buyer" (Goodhart, 1989: 26). This "something" is what Keynes (1971a: 5) labelled money proper, "delivery of which will discharge the contract or the debt", thereby functioning as a socially accepted means of payment. In modern market economies, several distinct assets are accepted as a means of contractual settlement. However, whatever the particular form they assume (notes, coins, cheques, credit cards, etc.), they are primarily tokens which derive their social meaning from transforming the monetary values expressed in contractual relations into general wealth; i.e. their social function is to act as representatives of the standard of value. In this sense, money has both an abstract and a concrete existence, which, although performing distinct functions, are closely linked to each other. Indeed, they are integrated into the form of a social institution which allows the transference of wealth between independent agents through contractual relations. As it is through the delivery of those representatives of the standard of value that the private hopes of transferring wealth are confirmed, contracts will only be established if there is widespread confidence in the maintenance of that relation of representativeness between means of payment and standard of value over

According to Hodgson (1988: 148), the exchange relation has economic meaning only to the extent that it implies the transference of property rights from one agent to the other.

"Money is the thing which by delivery permits economic agents to discharge obligations that are the result of spot and/or forward contracts" (Davidson, 1982: 58).

As the General Equilibrium models have to adopt a real commodity "with non-monetary utility" as standard of value to achieve formal equilibrium (Hicks, 1982b: 35), they cannot explain that inescapable linkage between standard of value and means of payment in real-world capitalist economies. This fact unveils the incapacity of those models to find room for money without challenging their basic assumptions.
In this context, the purpose of this section is to discuss the conditions whereby some assets are both raised to and maintained in the position of being the representatives of the socially accepted standard of value, thereby performing the means-of-payment function of money.\(^\text{16}\)

The first point to be argued is that, given the strong connection between those functions, there is simultaneity in the acceptance of money as means of payment and its affirmation as standard of value. In fact, the origin of money both as a symbol and as an idea will be presented as the outcome of one and the same process: the generalization of market-oriented contractual relations as the basic mechanism for creating productive wealth. Moreover, it will be claimed that in modern capitalist economies the State is typically at the very core of that process, which gives state money the prerogative of acting both as the socially accepted standard of value and as the means of payment *par excellence*; i.e. because state money is the "physical embodiment of the monetary unit of account (numeraire) defined by the sovereign government" (Moore, 1988: 18), it is generally accepted at par as a concrete representative of the standard of value

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\(^{16}\) It must be emphasized, however, that the maintenance of that relation of representativeness does not guarantee the actual discharge of contracts. Although it provides the necessary conditions for the meaningful transference of property that the settlement of contracts entails, it does not exclude the possibility of frustration of the potential sellers, caused either by insufficient demand or by an illegal rupture of contracts.

\(^{17}\) Chick (1978: 50) justifies the need for unity between the standard of value and the assets which perform the means-of-payment function on the grounds that it "improves price formation, lowers the cost of haggling and mitigates uncertainty by reducing the variability of prices". She argues that if the assets used to discharge contracts were not the concrete representatives of the standard of value (with all their attributes of homogeneity, divisibility, etc.), the different transaction costs associated with each particular trade relation would disrupt the coherence of the price matrix, thereby disorganising the contractual relations. In contrast, the "impersonality of money ... contributes to eliminating the disorderly cross-rates of exchange which characterise barter transactions", thereby promoting the "unification of the price matrix" (ibid.).
within the limits of a nation. Thus, given the nature of the origin of money, it will be argued that the acceptance of state money as the concrete representative of the standard of value depends on the unbroken and widespread trust in the ability of the State to maintain stability in the relation of representativeness between concrete and abstract money, thereby acting as the guarantor of the institutional character of money.

Despite the essentiality of state money, there are several other monetary and financial instruments which act equally as a means of payment in modern market economies, therefore also operating as representatives of the standard of value. Thus, it is necessary to elucidate the conditions under which instruments other than state money are assigned an element of moneyness, so that they can also perform the means-of-payment function of money. In other words, it is necessary to explain the conditions under which those instruments can be believed as representatives of state money.

2.3.1 Trust and Authority

To act as a social institution, money must be widely trusted as both the abstract expression and the concrete representation of contractual values. The importance of the element of trust for both the emergence and maintenance of the institutional character of money is correctly pointed out by Frankel (1977) in connection to the nature of money in market-oriented economies. As Frankel (ibid.: 12) puts it, money is not "a consciously created artifact, but grows out of, reflects, and in turn affects the ever-changing relationships between individuals and the society which they compose". That is, money springs from, expresses and influences the process of socialization between private agents through exchange relations, being thus essential for its existence. In this sense, one can say that money as a social institution grew up with the markets, for, the
more market relations evolve and dominate the productive process, the more
the concrete representatives of the socially accepted standard of value are
regarded as the dominant instrument to discharge contracts. Therefore, it
is only when market relations become the dominant mechanism in the
reproduction of the economic system that money becomes a constitutive
element of market economies and assumes the role of one of their main
social operators. That is the reason why modern market economies cannot be
conceived but as monetary economies. In order to function in such a role,
however, money in its symbolic form has to be believed to be the bearer of
that regulatory power, for to claim money in exchange for goods always
implies the existence of an element of faith and trust (ibid.: 32). Trust
in the relation of representativeness between concrete and abstract money
is therefore a fundamental element for the maintenance of the social space
of measurement and exchange which monetary contracts provide.

The importance of trust in that relation of representativeness is
also emphasized by Hodgson (1988: 165), who affirms that "[t]he entire
economic system functions on the basis and belief that otherwise near-
worthless pieces of paper or metal will retain their acceptability and
consequently their value". That is, trust in money is a non-contractual
element capable of promoting confidence in the precarious values expressed
in monetary contractual relations. Given the prominence of the trust in
money for maintaining it as a social institution, then, it is necessary to
discuss the nature of the trust private agents hold in money. Only so can
the institutional character of money be fully elucidated.

For Frankel (1977:34), trust in money is solely the outcome of the
individual rationality of the agents and depends on "the moral ideology of
society" to be maintained. In a similar vein, Hayek (1990: 69) argues that
that confidence is the outcome of a process of selection of an asset by the
private agents from the multitude of competing private monies issued in a free and competitive society, so that the asset freely chosen to serve as money becomes the repository of the confidence of all participants of market operations. As a corollary, the state monopoly of money is regarded by these authors as the result of the "survival of the medieval idea that it is the state which somehow confers value on money it otherwise would not possess" (ibid.: 37), thereby constituting a permanent threat for the institutional stability of modern market economies.

Both Frankel's and Hayek's views subsume any societal totality in the realm of individual rationality, the trust in money as a social institution arising, by definition, exclusively from individual judgment. Such reasoning echoes Menger's (1892: 250) assessment on the origin of money, which is viewed as the unintended result of "particular, individual efforts of the members of a society", who select among all the commodities the one with the higher degree of "saleableness", which is thereby regarded as the ablest to perform the role of money. In this sense, money is not "generated by law. In its origin it is a social, and not a state-institution" (ibid.: 255). The evolution of this process, which combines the acknowledgment of the properties of the commodities and the influence

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18 For Menger (1892: 244), then, the choice of one particular commodity to act as money is based on the difference of degrees of saleableness between the commodities, which indicates "the greater or less facility with which they can be disposed of at a market at any convenient time at current purchasing prices, or with less or more diminution of the same". Moreover, insofar as the perception that a certain commodity is more easily exchanged and therefore more widely accepted in exchange for all the other commodities spreads, the saleability of this commodity is further enhanced.

19 Despite his firm opposition to the idea of conceiving money as an institution created and enforced by the State, Menger (1892: 250) concedes that sometimes this may be the case: "It is not impossible for media of exchange, serving as they do the commonweal in the most emphatic sense of the word, to be instituted also by way of legislation, like other social institutions. But this is neither the only, nor the primary mode in which money has taken its origin".
of custom and conventional beliefs, leads the agents to single out a commodity (or a group of commodities) as money. Thus, the emergence of the convention which distinguishes and sustains a commodity as money is regarded by Menger (ibid.: 250) as the result of an evolutionary process which spontaneously disseminates throughout the society the belief that that commodity bears the highest degree of saleability. In this way, the origin of money may be largely interpreted as an accidental process, devoid of any intervention by the State.

Hodgson (1988: 165), however, unlike Frankel and Hayek, does not consider trust in money to be threatened by state regulation, for in holding money "we do not put our trust in individuals but implicitly in the system and the state". The reason for this interconnection rests upon the fact that the discharge of a contract implies transfer of property, thereby requiring "a body of contract law with criteria for distinguishing between voluntary and involuntary transfers of goods and services, and courts to adjudicate in such matters" (ibid.: 150). Accordingly, it is not possible "to erect a rigid dichotomy between the state and the nexus of individual interests" (ibid.: 153). Still more crucial for the point made in this thesis, however, is the fact that the acceptability of money as a valid means of payment rests on the belief in an implicit guarantee given by the community that money will continue to be accepted as such. This belief, however, is neither imposed by a particular agent nor is the outcome of the sum of the individual beliefs in each other's behaviour; instead, as Simmel (1990: 179) states, "[t]he feeling of personal security that the possession of money gives is perhaps the most concentrated and pointed form and manifestation of confidence in the socio-political organization and order". In this sense, one argues that the understanding of the social trust in money requires the abandonment of the methodological individualism on which
neoclassical thought is grounded and its substitution by a methodological approach in which social conventions in modern capitalist economies are shown as the outcome of an interactive relation between the individual and social spheres of those economies.

Thus, what Frankel and Hayek fail to observe is that the indisputable point of the importance of trust in money in modern market economies is not incompatible with the state enforcement of that trust. The sharp separation between trust in money and state interventionism as incompatible concepts misses the fact that they are complementary aspects of the continuity of the institutional space in which contracts can be both socially expressed and discharged. At the base of this misconception is the divorce between the process of constitution of money as a symbol of social trust and the increasing control of money by the State. Therefore, it is only through the restoration of this interconnection that the role of money as a social institution can be purposefully assessed. To restore the unity between the confidence in the ability of money to perform its functions and the enforcement of this confidence by state actions requires, however, a closer inspection of the conventional character of that confidence and its inherent fragility.

According to Orléan (1992: 126), the conventional nature of the process whereby one asset is singled out as money betrays the fragility of the confidence in its capacity to act as a concrete representative of the standard of value. As there is no intrinsic characteristic of the asset which performs the means-of-payment function which assures its continuity as such, that capacity depends solely on the maintenance of the common

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20 As Chick (1992: 142) affirms, "[t]here is mutuality of state and social support of money in the modern Western economy: the dichotomy erected by philosophers of money, between state money and socially accepted money, needs to be replaced by an appreciation of the interactive support of the two forces in a modern economy".
belief according to which that object will be accepted by each of the agents as money. However, the fact that a commodity is currently accepted as money does not imply its continuance as money over time. Indeed, the maintenance of that belief can only be assured if the conventional character of money is hidden away from the consciousness of the private agents. This is so because the awareness of the conventional nature of money can cast doubts about its qualifications for being money, thereby threatening the legitimacy of the social space created by the emergence of money. And if doubts arise, a process similar to that which created a convergence towards a single asset to serve as money can degenerate into "a cumulative and self-validating process that destroys it" (ibid.). In other words, the disclosure of the conventional character of the moneyness attributed to the instruments which act as means of payment would unveil the tension between private interests and social needs concealed by the confidence in the normative powers of money. As a consequence, the violence intrinsic in market relations would emerge and overpower the role of money as the regulator of the private agents' desires for wealth.

Thus, to maintain the stability of that convention and to neutralize this risk, it is necessary to "materialize" the belief in money in terms of an "external" entity. However, as Orléan (ibid.) puts it, "[t]he process of externalization by means of which social unanimity is rendered legitimate cannot be based on rational calculations alone". To base this process of externalization solely on private calculations is to ignore any distinction between the private and the social spheres; indeed it would

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21 Hodgson (1992: 402), for example, points out the problem of potential "quality variation" of the commodity which performs the means-of-payment function of money, which may put the purity and value of the monetary unit in doubt. If some agents "regard the commodity in question as unreliable and therefore avoid it as a medium of exchange", the evolution of the monetary unit can be "subverted".
mean to provide each individual agent with the rationality of the society. Instead, the legitimacy of money involves certain degree of opacity, for it is the "opacity constitutive of legitimacy" that "makes society exist as a totality that is partly disconnected from individual wills" (ibid.). Thus, to maintain money as a social operator it is necessary to alienate the agents from the conventional nature of money, giving money a symbolic meaning which cannot be reduced to the sphere of individual rationality.

In this context, it is argued here that only the state regulation of the money market is capable of giving legitimacy to money, thereby promoting its reproduction as an institution over time. As opposed to the liberal creed, which affirms that it is necessary to free the pacific human nature from the oppression of institutions, one proposes that the state regulation of monetary relations is a necessary requirement for pacifying the intrinsically violent human relations in market economies. This proposition does not assume that the State is a deus ex machina capable of organizing from "outside" the world of the production of wealth. Instead, as Hodgson (1992: 405) puts it, the point being made is that the "story of the supposedly spontaneous emergence of money is faulty, and strong encompassing institutions such as the state or central banks are essential to the creation and survival of a viable monetary unity, even if the state (or central bank) may bring associated problems".

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22 As Dupuy (1989: 49) argues, "the symbolic transcends the imaginary. The symbolic governs the movements or 'play' of the imaginary and is in no way affected in turn by the imaginary order".

23 As to the problem of "quality variation", Mirowski (1990: 712) argues that precisely because money "is socially instituted, its invariance cannot be predicted on any 'natural' ground, and must continually be shored up and reconstituted by further social institutions, such as accountants and banks and governments".

24 Although the State may provoke disruptions in the economic sphere through the misuse of economic policies, it is worth emphasizing that capitalist market economies are inherently and endogenously unstable and
sense, the normative powers of money would depend on the widespread confidence in the capacity of the State to guarantee the relation of representativeness between the standard of value and the assets which perform the means-of-payment function of money.

The idea that state intervention cannot be dissociated from the institutional role of money is corroborated by the fact that there is unity between the historical process of the creation and maintenance of money as a social institution and its control by the State, for both are the outcome of the same process: the constitution of modern nations as market economies. One cannot understand the transformation of autarchic economies based on custom into market economies - in which money is the more important social operator - without the enormous intervention of the State. As a matter of fact, the modern State and the monetary (market) economies were constituted together, so that the trust in money is also the trust in the ability of the State to maintain money as the social institution upon which the market economy can develop. Both are maintained or abolished together.

This confluence between the development of market-oriented economies and the role of the State in maintaining money as a social operator is demonstrated in Polanyi's (1946) analysis of the transformation of archaic societies into modern market economies. According to Polanyi (ibid.: 64), the spreading of the market as the fully dominant sphere for the reproduction of wealth was neither a gradual nor a natural process.25

25 Polanyi (1946: 67) argues against the view which assigns a natural evolution from individual acts of barter to the development of local markets and then to the establishment of internal or national markets. According to him, although individual acts of barter or local markets have existed in so many types of primitive societies, they were considered as incidental since they did not provide for the "necessaries of life". They were subordinate traits in societies where other "principles of economic
Instead, the establishment of the market as an institution on which the material reproduction of societies as a whole depends was only possible through the intervention of the State: "Regulation and markets, in effect, grew up together" (ibid.: 74, emphasis added). Through this process, not only were goods and services affirmed as commodities, but also those elements which make possible the production of commodities—namely labour, land and money—were equally enforced as commodities.²⁶ In other words, state intervention was a fundamental element in the process of the formation of the "self-regulating" market economy.

Thus, one can say that the construction of modern national spaces as (monetary) market economies cannot be understood without state intervention. The elements which unify modern nations have no similarity to those that maintained their unity in the past. Instead of political and personal rules, the unity of nations is now made of economic relations. All the relevant activities for the material reproduction of the society are based on market-oriented contractual relations. And as long as money is the element that allows both the establishment and the discharge of contracts, it is on the top of the institutional framework of market economies, which

²⁶ Therefore, the state monopoly of money is not, as Hayek (1990: 37) suggests, the result of the "survival" of a medieval idea; quite the contrary, it is the result of the complete abolition of the medieval institutions which prevented the full establishment of the market as the dominant form of organizing production and generating wealth in the Western economies.
is only preserved over time through the maintenance of trust in the ability of state regulation to maintain money in such a crucial position.

2.3.2 Abstract and Concrete Money

State money is accepted for the discharge of contracts established according to the terms of law, thereby acting as a legal means of payment within the limits of a nation. However, it is not only state money that can serve as means of payment in contractual settlements. In fact, the development of market economies supported by money contracts enabled the use of acknowledgments of debt as a substitute for currency in the settlement of contracts; i.e. credit money itself begins to operate as a means of payment.\(^\text{27}\) As a consequence of this evolution, concrete and abstract money do not always answer to the same name; on the contrary, one of the main features of modern monetary economies lies in the existence of many monetary and financial instruments other than state money (cheques, credit cards, etc.) performing the means-of-payment function in order to allow decentralized agents to discharge contracts.

Due to this feature, modern economies share, to some extent, some similarities with the economic systems prior to the eighteenth century, when there was a clear distinction between a monetary unit used as standard of value and other monetary units used to discharge contracts. In those pre-modern economies, as Einaudi (1953: 237) affirms, the "imaginary" money that performed the standard-of-value function was "a mere instrument or technical device used to perform some monetary devices", and it had no

\(^{27}\) Chick (1986) traces the history of the evolution of the banking system in England, pointing out the emergence of the financial institutions which enable credit money to act as means of payment. Niggle (1990), in turn, adapts Chick's approach to the United States experience.
existence or direct representativeness in the world of the concrete monies. Nevertheless, the "real" monies which actually transferred property — i.e. which possessed the ability to settle contracts — had to be rated to the imaginary money at the moment a contract was expected to be discharged so that they could function as a means of payment. Thus, in both modern and pre-modern economies one can find instruments which, although not being direct representatives of the accepted standard of value, perform the means-of-payment function of money. However, the fact that the reproduction of pre-modern economies were not yet primarily based upon contractual relations of production and exchange between independent producers, i.e. the fact that they were not market economies, makes the differences between them and the modern ones much more illuminating than their similarities. The more striking difference between these economies relates to the relation of representativeness and, therefore, to the process of convertibility between those instruments and the adopted standard of value.

In pre-modern economies the ratio between the imaginary, ideal or abstract money and the real or concrete monies was determined by specific markets like any other commodity, being thus the result of an infinite number of economic and non-economic forces; as a consequence, the process of convertibility was subject to many sources of instability (ibid.: 257). In modern economies, conversely, the monetary standard (state money) is not only "imaginary" money but concrete money as well, for it has direct and legal expression in the world of money-things, thereby making the ratio

28 "Although it was possible to make contracts or to keep accounts in imaginary money ... it was impossible to make actual payments in these monetary units, since they had not been coined for several centuries" (Einaudi, 1953: 236).
between abstract and concrete money stable (one Pound is always one Pound).\textsuperscript{29} It is the existence of this par value relation between abstract and concrete state money that gives economic agents an anchor for using other "things" as means of payment in a stable way, provided there is a stable relation of representativeness between the various monetary and financial instruments which perform the means-of-payment function of money and the concrete embodiment of state money. The maintenance of the stability of that relation of representativeness requires that (i) the instruments used as means of payment are denominated in terms of the state money; (ii) assurances are given that they are always and immediately convertible at known terms into the legally enforceable means of payment (state money); (iii) a clearing institution for these instruments exists (Moore, 1988: 21).\textsuperscript{30}

Therefore, in an environment in which a multitude of assets performs the means-of-payment function of money, one of the basic conditions for the maintenance of the unity between abstract and concrete money is the stability of the expected terms of convertibility of these instruments into state money and, consequently, into each other. Put in another way, contractual relations are only established if the means-of-payment function

\textsuperscript{29} This distinction expresses the hallmark of modern monetary economies, for it is the existence of a national money issued and regulated by the State that sustains, through time and within a nation, a space of social agreement as to the monetary contracts. Whereas money in modern economies is an articulated set of symbols (a "uniform grammar"), money in pre-modern economies is an "incompletely unified system" (Polanyi, 1968: 175), which prevents the economic system from maintaining a space of socialization in which wealth can be created and exchanged primarily through monetary contracts.

\textsuperscript{30} According to Moore (1988: 21n), "[w]hat prevents other types of private debt [i.e. other than bank money] (e.g. trade credit, commercial paper) from fully becoming money is the absence of a specific clearing institution plus the absence of confidence that they will continually be convertible into legal tender on demand at a fixed parity, as is necessary for general acceptability as a means of payment".
of money is expected to be indistinctly performed by either the state money (legal tender) or those assets legally convertible into it (e.g. credit money). It is a necessary condition for the maintenance of money as a social institution because it provides socially recognized elements for the discharge of monetary contractual relations, thereby sustaining one of the basic prerequisites for putting the process of capitalist production in motion, so that private wealth (profits) and social wealth (production and income) can be simultaneously created. In other words, it gives the proof that those assets which act as means of payment have the attributes of the general equivalent (Aglietta, 1987: 336). Accordingly, one can argue, following Winnett's (1992: 61) suggestion, that money in modern capitalist economies has both "structure" and "process":

The structure is a set of relatively persistent conventions and understandings. Within the structure, the elements are impermanent events with a capacity for evolution. Money in the abstract sense functions through sets of social conventions and understandings that sustain continuing economic activity; money in the concrete sense consists of the transitory and evolving collections of financial instruments created and transferred in the course of that activity. The former is a structure, and the latter, a process...

Although analytically separated, money in the concrete sense only acquires social meaning if it refers to money in the abstract sense, for only the integration between process and structure enforces the existence of money as a social institution. In other words, the evolving collections of monetary and financial instruments have to be believed to maintain stable terms of convertibility into the abstract money in order to maintain the conventions which allow the existence of social cohesion in a constitutively anarchic economy. From this essential requisite arises the importance of both the institutional framework which regulates the relation
of representativeness between those instruments and the state money and the confidence held in its stability over time.

Thus, to maintain money as a social operator it is necessary to reaffirm continuously the trust in the unity between structure and process, between abstract and concrete money, so that the relation of representativeness between them be preserved. However, as this unity depends on the confidence held in the stability of an institutional framework whose operation relies heavily in the behaviour of the State, the trust in money as a social operator depends on the trust in the State as the guarantor of that stability. Only if the trust in the ability of the State to preserve the unity between abstract and concrete money remains unchallenged is it possible to maintain the stability of the social sphere in which the essential procedure of market economies—the establishment of monetary contracts—operates. If this condition is not fulfilled, or even if it is not expected to be fulfilled in the future, those monetary and financial instruments will not be accepted as representatives of the direct embodiment of the standard of value; i.e. as representatives of the "things" the State declares to be legal tender. As a consequence of this rejection, the social space engendered by the development of money as an institution would be shrunk and disorganized, thereby preventing the agents from establishing contracts in an organized way.

2.4. Money as a Store of Value

Besides operating as standard of value and means of payment, money, as an institution which makes the existence of contracts between private agents feasible, must still perform a third basic function: to be a store of value. The relevance of this function for the establishment of monetary contracts (and therefore for the creation of productive wealth) springs
from two constitutive aspects of the productive process in capitalist economies. The first refers to the time-oriented character of some of those contracts (e.g. wages), which implies that the producers are expected to meet some of their contractual obligations only in the future. For these forward contracts to be properly discharged in their due moment, the producers must maintain control over the legally enforceable means of payment over time, for these are the concrete representatives of the socially accepted standard of value in terms of which contracts are established. This justification for demanding money as a store of value is associated with what Keynes (1973a: 195) calls the transaction motive, which, in fact, reflects the need to pay off those regular contractual obligations associated with the productive activity which are deferred in time. As such, the transaction balances are active ones, being kept only to "bridge the interval between the receipt of income and its disbursement" (ibid.).

The second aspect which justifies the essentiality of the store-of-value function of money concerns the uncertainty over the value of the income flows expected by the producers. This feature indicates that the producers may be surprised by unexpected needs for means of payment to pay

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31 Keynes does not clarify which assets should be included in a definition of money, for, according to him, any definition is arbitrary and elaborated in the "most convenient way for handling a particular problem" (1973a: 167n). In order to clarify the point under consideration, however, he takes the concrete representatives of state money as a proxy for the assets which must be held as store of value. This strategy is also temporarily adopted here.

32 Both the amount that is actually held and the length of time during which it is held depend on the frequency of payments and on the institutional arrangements for their discharge. The typical pattern for an entrepreneur is a frequency of income inflows (i.e. receipt of income) greater than that of payments (Chick, 1983: 195). Consequently, for each payment period (i.e. the interval between two contractual income outflows) a certain amount of money has to be separated from the streams of income so that monetary contracts due at each period can be settled.
their debts and, therefore, must seek protection against the consequences of the disclosure of unforeseen facts. In other words, as there is no certainty as to the ability to cancel future contractual obligations only with the expected income flows, precaution against bankruptcy leads the producers to hold an extra amount of money before activating the productive sphere. This additional reason for keeping money as store of value is associated with the precautionary motive pointed out by Keynes (ibid.: 196). If it were possible to know the future, it would be meaningless to maintain any money in excess of what is required to fulfil the transaction motive. However, as a consequence of the inescapable state of ignorance in which producers have to make contracts, the lower the state of confidence they attach to their expectations as to their future needs for means of payment, the bigger their desire for maintaining control over precautionary balances (Carvalho, 1992: 105). In other words, the precautionary demand for money gives a particular producer a feeling of being safe against any unpredictable outcome, for by holding precautionary balances the producer assumes a fluid behaviour, thereby preventing him from being "locked in", situation which could prove to be inadequate in the future (Hicks, 1982a: 261). Moreover, unlike the transaction balances, the precautionary balances are not held to be certainly spent within a certain period. Instead, they can be either spent or not, depending on the discrepancies between the expectations about future events held by the producers in the beginning of the production period and the form the events will actually evolve during that period. Therefore, although the

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33 In fact, Keynes (1973a: 196) associates the precautionary motive with the need to provide both "for contingencies requiring sudden expenditure and for unforeseen opportunities of advantageous purchases". However, as this chapter is only concerned with the conditions necessary to establish monetary contracts, the latter aspect of the definition will not be dealt with.
precautionary balances may be actually used, they are, in principle, inactive (Chick, 1983: 196).

Despite these distinctions, what both motives clearly elucidate is the importance of the store-of-value function of money for the establishment of contracts. Money is kept over time as a way of conserving purchasing power to be used to discharge contracts when and if necessary; i.e. money, as a store of value, functions as a "time-machine" which enables the agents to dispose of purchasing power at any moment they need to do so. As Chick (ibid.: 194) puts it, money "has no intrinsic use"; its usefulness derives "from what it will buy and the flexibility it affords over the timing of payments". However, this function is not by itself a distinguishing property of state money, for other assets (e.g. financial assets) may also function as "time-machines", provided they are expected to be immediately convertible into the legal means of payment when so required; i.e. provided that they are liquid assets. Thus, although state money has been temporarily used as a proxy for all assets which may serve as store of value, so that the reasons for the existence of a demand for liquidity could be examined, it is now necessary to consider the existence of those other "time-machines".

Distinct assets have different degrees of liquidity, depending on the terms the agents expect them to be transformed into the legally enforced means of payment: whereas some are expected to be convertible at par value, others are expected to lose part of their value if required to be converted at short notice into the means of payment. Nevertheless, the crucial point is that the asset(s) chosen to be kept as store of value must be expected to be convertible into the means of payment at terms which give producers

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34 As Keynes (1973a: 237) affirms, it is convenient to hold "assets in the same standard as that in which future liabilities may fall due...".
confidence to establish contracts which will only be discharged in the future; i.e. the degree of liquidity of these assets must be compatible with the confidence the agents have in their expectations concerning the needs for means of payment in the future.

In this context, this section intends to investigate the criteria for attributing different degrees of liquidity to distinct assets, which provide the producers with elements to choose those assets which more adequately satisfy their requirements for a store of value. Such an investigation will require, however, a preliminary analysis of the nature of liquidity, so that the discussion concerning the differences of the assets in terms of liquidity can be better carried out. Finally, this section will also examine the necessary conditions for the existence of the store-of-value function of money, so that money can act as a social institution. It will be argued that, in the limit, monetary contracts can only be established if at least one of the available assets is believed to be liquid enough to placate the fears of the producers when committing themselves to time-oriented contracts.

2.4.1 The Scale of Liquidity

Liquidity is an attribute which economic agents assign to different assets according to the conditions under which these assets are expected to be exchanged for the socially accepted means of payment or its legal representatives. As such, the liquidity of an asset is related to its expected power of disposal over other assets (Keynes, 1973a: 226), which depends, in turn, on the expected behaviour of its spot market in the future. The less the demand for a certain asset is expected to be diverted toward other assets by a change in relative prices, the more liquid the asset in the agents' minds, for the belief in the existence of a general
demand for the asset persuades the agents of the ease of selling it whenever necessary. In other words, the smaller the elasticity of substitution of an asset, the higher the liquidity attached to it. Besides, the expected stability of the supply of the asset between the moment in which it is decided to hold it and the moment in which it is expected to be sold, also influences the evaluation by the agents as to the liquidity of the different assets. That is, the smaller the elasticity of production of an asset, the more scarce the asset is expected to be in the future and the higher the liquidity associate with it. As Keynes (ibid.: 241n) asserts,

the attribute of 'liquidity' is by no means independent of the presence of these two characteristics [i.e. low elasticities of both production and substitution]. For it is unlikely that an asset, of which the supply can be easily increased or the desire for which can be easily diverted by a change in relative price, will possess the attribute of 'liquidity' in the minds of owners of wealth.

From that definition, it is clear that there is no absolute standard of liquidity, but rather a scale of liquidity (ibid.: 240), in which to each asset a different degree of liquidity can be assigned. In this sense, the degree of liquidity associated with an asset is a two-dimensional attribute, for it depends on (i) the imagined ability of immediately selling the asset in its specific market and (ii) the expected variation in its market price when it is to be sold immediately, compared to its price after negotiation. Although the degree of liquidity associated with specific assets varies from time to time, depending on both concrete and estimated changes in the "social practices and institutions" which mould the markets in which the assets are traded (ibid.), it is possible – at each moment of time and for each individual producer – to arrange distinct
assets into different groups, according to the expected behaviour of their spot markets.

Hicks (1967: 36) proposes differentiating between three groups. The first group assembles those assets "whose spot market is poorly organized, disorderly, thin or even notional" (Davidson, 1982: 33), therefore restraining their capacity for being exchanged for any other asset. As they are not expected to be actually marketable they are referred to as *illiquid* assets. As opposed to these non-marketable assets there are those that are "traded in well-organized and orderly spot markets" (ibid.: 34); i.e. that are expected to be resalable at short notice. These are regarded therefore as *liquid* assets. However, there exists various assets that, although marketable (realisable at short notice), possess different degrees of liquidity.35 For this reason, it is necessary to distinguish between distinct liquid assets with regard to the terms on which they are expected to be realisable (Hicks, 1982a: 242). Accordingly, those that are expected to be immediately realisable *without loss* are termed *fully liquid* assets. Evidently, the assets to which the maximum degree of liquidity is attached are those that, both by force of law and by social convention, are the concrete embodiments of the socially accepted standard of value; i.e. those assets which function as means of payment on spot. As Davidson (1982: 34) puts it,

*Fully Liquid Assets* include money or any other asset which can immediately be converted into money in a spot market where the market maker [i.e. the central bank] "guarantees" a fixed and unchanging net spot price. Thus, fully liquid assets represent directly or indirectly the availability of a specific quantity of undated cash which can be used for the discharge of contracts at any time.

35 "[L]iquidity is a characteristic which is only possessed by perfectly marketable assets; but ... they do not possess that characteristic to the same extent" (Hicks, 1982a: 242).
Thus, the higher the degree of confidence in the capacity of the market maker to maintain the spot price of a particular asset over time, the higher the degree of liquidity attached to this asset. Accordingly, it is the incapacity of the market maker (or its absence from some markets) to guarantee the terms of immediate convertibility of the majority of the liquid assets (i.e. those which can be realisable at short notice) into money that makes the agents regard them as less than fully liquid assets.

In modern capitalist economies, however, the assets which function as means of payment on spot are only a small part of a much wider structure of liquidity, which comprises many other money-denominated assets and overdraft facilities as well, most of which both yield some return to their owner and are easily convertible into the means of payment at some finite cost. As the Radcliffe Report (1959: 133) emphasizes, "there are many highly liquid assets which are close substitutes for money, as good to hold and only inferior when the actual moment for a payment arrives". The crucial question, however, is that the "moment for payment does arrive, and then it is possession of money that counts..." (Chick, 1977: 72); even highly liquid assets are close substitutes for money only while held idle, but not in payment. When the moment of payment arrives, "they have to be turned into cash to be so used. And that is vital" (Hicks, 1982a: 265).

Accordingly, although these assets share some degree of "moneyness" with the legally accepted means of payment, such property does not spring merely from the fact of their being stores of value, but mainly from their ability to be converted into the legal means of payment whenever required.

Thus, one of the crucial questions a producer faces when establishing monetary contracts relates to the choice between different assets to perform the store-of-value function of money. Given the existence of highly liquid interest-bearing assets, it is reasonable to argue that the demand
for those assets legally enforced as means of payment will be confined to
the more immediate need for active balances, i.e. those necessary to comply
with the more urgent requirements of the transaction motive. The need for
both less immediate transaction balances and precautionary balances, in
turn, is mostly satisfied through the control over short-term interest-
bearing assets, which are easily turned into means of payment when and if
necessary. However, and despite the importance that specifying the
distinct motivations for demanding liquid assets may have, it is obvious
that the group of assets held for each of those purposes forms a "single
pool", which the producer is under no necessity to segregate into separate
compartments. In fact, as Keynes (1973a: 195) affirms, "they need not be
sharply divided even in his own mind, and the same sum can be held
primarily for one purpose and secondarily for another". Thus, one can infer
that the form which the liquidity preference actually assumes is not one
based on specific needs for liquidity, but rather one which expresses the
general need for disposing of purchasing power over time, so that either
regular or unexpected expenses can be met whenever necessary. As a
consequence, when the liquidity of a specific asset is being evaluated, the
producer must take into account his needs for liquidity in general and not
only his needs associated with a particular motive. More precisely, the
"single pool" comprising the assets kept because of the liquidity attached
to them must be treated, in principle, as inactive balances, this being the
reason why the liquidity of any particular asset depends on its expected
power of disposal over other assets at any time in the future.

In sum, when deciding which assets are to be held as "time-machines",

36 From this reasoning, one can say that the liquidity preference of
an agent expresses, in fact, not just his preference for liquid as opposed
to illiquid assets, but rather his preference for short-term as compared
to long-term assets (Wells, 1983: 535).
a producer must take into account (i) his expected needs for means of payment in the future and (ii) the expected terms of immediate convertibility of the less than perfectly liquid assets into money. In general terms, the stronger his confidence in his expectations concerning future needs for means of payment, the less his need to maintain highly liquid assets as a store of value; i.e. the stronger that confidence the easier to match the maturity of less liquid assets with the need for means of payment. Conversely, the weaker that confidence, the greater his demand for highly liquid assets. The important point is that the chosen assets must be expected to be quickly convertible into the means of payment at terms which enable the holder either to discharge his contracts at the time due or to face unforeseen needs for money.

In order to make such a decision it is necessary to form expectations (at the moment contracts are established) concerning the terms of immediate convertibility of each of those assets into the accepted means of payment in an unspecified future. Only this evaluation allows the producer to rank the distinct available assets in terms of degrees of liquidity (i.e. to form a scale of liquidity), so that the ones which best satisfy his needs (given his expectations and the degree of confidence held in them) can be chosen. However, as the determination of these terms depends on the behaviour of specific markets in the future (at any moment in the future), the producer does not know what the outcome of his decision will be if he decides to maintain a specific asset instead of another because of the supposed higher degree of liquidity which he attaches to the former. Put another way, the producer is ignorant of the actual outcome of his decision to maintain a specific asset as compared to what he intended to obtain by taking this decision (a certain degree of liquidity). Nevertheless, and in spite of this fact, moments will arrive when decisions like that must be
taken. As a consequence, it is necessary to understand how a producer acts in an environment of uncertainty in order to obtain the elements necessary to the making of his choice.

To understand that rationale has been the subject of an extensive body of literature, most of which proposes the application of a theory of expectations based on a distributional uncertainty variable (probability). As it will be shown, however, this procedure does not adequately explain the process of choosing which assets to keep because of the liquidity assigned to them. In contrast to those approaches, it will be suggested that the particular question considered here can only be purposefully approached through the use of a non-distributional uncertainty variable, as the one proposed by Shackle (e.g. 1961, 1979).

2.4.2 Liquidity and Probability

The notion of probability is usually presented either as a feature of the actual material world, and therefore an object of knowledge per se or, alternatively, as a type of knowledge held by an agent or a group of agents concerning an aspect of reality.\textsuperscript{37} For the former interpretation, the probability of an event’s occurrence is independent of whatever the human beings think of it, for probability is an objective relation just waiting to be perceived by them. As opposed to this objective approach, the latter interpretation assigns to probability an epistemological connotation, in which probability represents "the degree of knowledge, or

\textsuperscript{37} As Lawson (1988: 40) asserts, "some contributors write of probabilities as something to be discovered, learned about, and known. Others avoid such terminology and write instead of probabilities as something which agents possess, or attach to particular propositions, and so on. It is the former group that typically, if implicitly, envisages probability as a property of external reality, while the latter group usually interprets probability as being merely a form or an aspect of knowledge".
degree of belief, or degree of rational belief held by a human being or a
group of human beings" (Gillies and Ietto-Gillies, 1991: 394). However, as
it is the objective approach which is hegemonically referred to when
probability theory is mentioned, it is in regard to its features that the
unsuitableness of the notion of probability to establish a scale of
liquidity will be discussed.\footnote{Nevertheless, the core of the criticisms apply equally strongly to
the subjective approaches, for they refer essentially to the distributional
character of objective probability theory, which is shared by the
subjective one (Vickers, 1987: 214).}

First of all, it is important to note that the scale of liquidity to
be covered by a theory of expectations must encompass the \textit{whole} set of
available assets (from the most liquid to the least liquid assets) which
may potentially serve as store of value. This is so because (i) the concept
of liquidity is individual, therefore varying from producer to producer
according to his place in the economic system\footnote{For this reason, a producer may consider the possibility of
maintaining an asset which is largely regarded as illiquid just because he
has economic power to sell such an asset on spot without large losses.}
and (ii) additional
factors (e.g. inflation) may change personal evaluations of what is
regarded as an illiquid asset; in this sense, a house, for instance, may
be suddenly thought of as a liquid asset. Thus, the spectrum of assets
taken into account must be wide enough to encompass these differences.

Despite this requirement, it will be argued that classical probability
theory is unable to explain how the degrees of liquidity of the less liquid
assets are defined. This intrinsic limitation makes it incapable of
explaining the process whereby producers choose assets to act as store of
value.

The probability theory approach assumes that the expected immediate
sale price of the assets varies within a pattern which can be discovered
by observing the past behaviour of the market where the asset is to be sold. Once this pattern is established, one can then attach confidence intervals to different ranges of expected losses and gains, so that the distinct assets can be ranked in terms of degrees of liquidity and the choice between them can be made. To be logically consistent, however, that assumption must fulfil two essential conditions: first, the list of prices which are supposed to arise from attempting to sell the asset should be complete; second, a residual hypothesis should not exist. That is, producers should know exactly what are all the possible prices to be expected, including the one which is going to be true, thereby leaving no room for outcomes not known at present. The completeness represented by this list means that all these hypotheses taken together provide the producer with knowledge concerning the prices a particular asset can fetch when sold in its market at a certain point in the future. This knowledge is expressed through the assignment of shares of probability to each of these expected prices, so that the sum of them is equal to unity. Thus, those two conditions imply that "if extra hypotheses are each to be accorded non-zero values of the variable, some of the hypotheses in the initial list must be deprived of part of their shares of it" (Shackle, [40]).

In fact, there is an alternative objective approach to probability which deduces the frequency of an event's occurrence in the future uniquely from the inspection of the structure of the system which generates the event (the so-called a priori probability theory). However, as it makes the same basic assumptions of the most widely employed statistical probability theory, the following discussion will be based mainly on the features of the latter.

Some return - interest or capital gain - must generally be expected with the sale of the asset kept as store of value, for if liquidity were the only consideration, the legally enforced means of payment would be the only assets demanded to perform that function (Anjos Jr. and Chick, 1993: 11).

These two conditions are a specific application of the two general conditions pointed out by Shackle (1961: 49) as necessary to give logical consistency to any distributional uncertainty variable.
1961: 51). Accordingly, the acknowledgment of the existence of currently unknown hypotheses would deprive the agents of the knowledge associated with the already listed hypotheses, thereby preventing them from attaching any meaningful numerical share to these hypotheses. To accept that assumption, however, violates the fact that the set of possible alternative terms of immediate convertibility of at least the less liquid assets into money at any moment in the future cannot be always deemed complete. There are some outcomes which are unknown or even unknowable.

The impossibility of defining the complete set of prices which may arise from attempting to sell one of those assets at short notice results from the fact that these prices depend on the future behaviour of decentralized and independent agents in a specific market, about which there exists no information. For each particular producer, the "form and character" of the future "waits to be created, to be originated, by choices to be made, now and in time-to-come, by himself and others" (Shackle, 1979: 27). The yet non-existent is unknown. Thus, it is the radical uncertainty which encompasses those decisions that makes the set of prices which a particular asset may fetch always incomplete and incompletatable, for outcomes which are not or even cannot be brought into consideration now can happen to become true in the future. To admit this fact, however, makes the "distribution" of shares among the expected outcomes meaningless. As Shackle (ibid.: 83) questions, "what meaning can he [the decision-maker] assign to a distribution, over the items of a list recognized to be incomplete and incompletatable, of a quantity representing the certainty that the eventual truth will be one of the sequels he has, at some present, already conceived and listed?" Therefore, it is the incompleteness of the information concerning the outcomes of a certain action - and the impossibility of obtaining such information - that makes probability
numerically indeterminate, thereby preventing the agents from applying
distributional uncertainty variables as a way of overcoming the ignorance
which is inherent in choosing an asset to perform the store-of-value
function of money.

The inadequacy of classical probability theory for understanding the
gathering of information necessary for building the whole scale of
liquidity is still more evident when one examines the requirements of the
methods utilized both to determine the set of outcomes associated with a
particular course of action and to calculate the probabilities attached to
each of these outcomes. Probability theory implicitly assumes that
experiments are either divisible or, if not divisible, at least serial (ibid.: 59). For the present discussion, the first characteristic means
that, if an asset is sold several times, the recording of the frequency
with which each specific price is fetched allows the calculation of the
probabilities of those prices occurring in the future if a producer
attempts to sell that asset once again. The second, in turn, implies that
the prices obtained by different agents selling a certain asset at the same
time can be pooled to calculate the probability of fetching specific prices
when selling that asset again in the future. However, whatever method is
employed, individual experiments can only be so compared with each other
so as to draw the probabilities associated with the possible outcomes of
each of them if they are regarded as similar experiments occurring in a
stable environment. In this sense, the process which generates classical
probability theory must be ergodic (Davidson, 1988: 330).

However, one cannot assume two single choices for assets to serve as
store of value as being "similar" in any relevant way. Instead, they are
unique in two important senses. Firstly, because they refer to expectations
formed at specific moments concerning the price an asset will fetch on a
particular and unspecified date. This uniqueness makes any attempt to determine the probabilistic frequencies associated with its possible outcomes through the application of a body of knowledge obtained from a set of either sequential or seriable experiments meaningless. Secondly, because those choices change the environment in which assets are expected to be exchanged for the means of payment in the future, thereby altering the ideas and beliefs of the agents concerning the future spot prices for that assets; i.e. they are crucial experiments. Accordingly, the recorded terms of convertibility which refer to a singular moment cannot be pooled with the terms obtained in another moment, for each alludes to a particular set of ephemeral and non-repeatable characteristics which define the behaviour of a specific market at each of those unique instants of time. Thus, the requirement for stability contrasts with the fact that the actual occurrence of the experiments changes - to a variable extent - the environment in which they take place. As a consequence, the information which a producer needs to construct his frequencies is not available, for the system is not stable enough to make the outcomes comparable to each other. In this particular sense, information is not only difficult or costly to obtain; it does not exist at all. These are the major reasons why one cannot replace the uncertainty inherent in the choice of assets to perform the store-of-value function of money by the knowledge implicit in probabilistic frequencies.

Despite its general application, these arguments are the truer the less liquid the asset concerned, for the less liquid the asset the more "crucial" the experiment of choosing it as a store of value. As a corollary, the refutation of the relevance of probability theory for

\[\text{\footnotesize{For Shackle (1970: 109), an experiment is crucial if "its very performance destroys for ever the conditions in which it was undertaken", such that it is "logically impossible" to repeat it.}}\]
understanding the ranking of assets in terms of their liquidity may not apply for the most liquid assets, given the stability of their markets and, therefore, the similarity of the "experiments" of choosing them to serve as store of value at different moments in time. However, as argued before, that ranking can only be fully understood if all the assets which may potentially serve as store of value are taken into account by the theory of expectations employed. Accordingly, to discuss the criteria for choosing assets because of their liquidity purposefully (i.e. without suppressing or concealing the uncertainty which involves the potential choice for the less liquid assets) requires the abandonment of the restrictive assumptions of classical probability theory and the adoption of a more comprehensive approach.

2.4.3 Liquidity, Desiredness and Possibility

The alternative approach proposed here is an application of Shackle's theory of expectations, which is capable of explaining how the information necessary to rank the whole set of available assets in terms of degrees of liquidity is gathered. To begin the exposition of Shackle's framework at the simplest starting point, it is necessary to admit that the complete skein of outcomes associated with the decision to hold a particular asset is unknowable, for they will depend on the future behaviour of independent actors in specific markets. In such a situation, the producer is assumed to try to list the outcomes which can be related to the decision of maintaining this asset as store of value. These outcomes relate to the expected terms of immediate convertibility of a specific asset into the accepted means of payment at any moment in the future. This list is neither complete (as is required when one is utilizing a distributional uncertainty variable) nor are its components (i.e. each particular term of
convertibility) derived from any statistical method. Instead, this list is imagined by the producer as comprising those outcomes which he deems possible; i.e. which there is no fatal obstruction associated with.\footnote{As Shackle (1979: 27) puts it, possibility "is the absence of discernible fatal obstacles".}

Moreover, this list of imagined possible outcomes can be indefinitely extended, the only barrier for extending it being the deadline given by the moment in which the decision must be taken (Shackle, 1979: 86). What is deemed possible is conditioned by the producer's remembered experiences and by the elements which stimulate his imagination: "Experience suggests what can come to pass. If experience could tell us what will come to pass, we should be in a world of determinate history, choice-denying and choice-abolishing" (ibid.: 59). Among the important elements which activate the imagination of the agents one can mention the institutional features of the markets for each particular asset and the information they provide about the past and present sale prices of those assets, as well as the past and present behaviour of the actors in these markets. However, even if such elements are carefully recorded and taken into account in the process of imagining which outcomes are to be considered as possible ones, they can do nothing more than suggest the list to be constructed. The acknowledgment of the uncertainty which involves the whole question creates a void which can only be filled by the individual imaginative process.\footnote{The role of institutions and past facts in shaping current expectations tends to be obscured in the Shacklean approach by the emphasis put on the role of imagination. However, as argued in this section, the former can be integrated into the approach without damaging the importance attached to the imaginative process. Market institutions and power of imagination are not mutually exclusive elements; instead, it is through their interaction over time that the producers perceive the world and construct their expectations.} As Shackle (ibid.: 8) asserts, "[t]ime-to-come imperiously demands to be filled, it provides the practical business of imagination"; accordingly, the producer...
"can, and must, exploit the creative freedom of his essential, inherent unkknowledge of the yet-non-existent content of time-to-come" (ibid.: 72).

Among these imagined and deemed possible outcomes there is one which can be considered as the neutral outcome. This is the crucial concept in applying Shackle's framework to liquidity. An imagined outcome is neutral if its value in terms of immediately realisable purchasing power at any moment in the future is the same, including any contractually-established interest, as that which would be achieved by maintaining the asset over the originally projected period of time - that is, without the need for liquidity. The neutral outcome represents neither gains nor losses for the producer. Consequently, all imagined outcomes which are larger than the neutral outcome would represent gains for the producer, whereas all imagined terms of convertibility smaller than the neutral outcome would signify losses. Thus, according to the current situation of a specific producer, the distinct prospective outcomes can be ranked in terms of their desiredness or counter-desiredness: the bigger the gains, the more desirable the outcomes; the bigger the losses, the more counter-desirable the outcomes.

In this simple framework, in which all the terms of convertibility deemed possible are arranged in order of desiredness and counter-desiredness, Shackle proposes that the agent's attention will be arrested only by the best and the worst of these outcomes. The reason for his only considering the two extremes outcomes lies in the fact that, as Shackle (1988: 3) explains,

all others will be eclipsed by one or other of these two extremes. It is these two extremes amongst the sequels all equally deemed possible which will constitute for the chooser the power of his action to benefit or harm him. He cannot know what his action will do for him. The two extremes are what, at best and worst, he supposes that it can do.
Shackle refers to these two outcomes as *focus hypotheses* or *focus elements*. In the present context, the two focal hypotheses associated with the decision of holding a particular asset indicate the two extreme expected terms of immediate convertibility of the asset into money (representing both gains and losses) which are deemed possible by the producer at the moment of his choice for assets to act as store of value. They eclipse all other possible imagined outcomes.

The above exposition does not distinguish between degrees of possibility. Until now possibleness has been considered as a category; i.e. outcomes are or are not deemed possible. However, although a producer may see no "fatal obstruction" to the occurrence of an extensive (and even non-complete) list of outcomes, he would not react in a similar way if different imagined outcomes happened to be true in the future. According to his current knowledge, some outcomes would surprise him more than others. Some would not surprise him at all, being sequels "entirely unobstructed, wholly free, within the chooser's thought, of any threatened interference" (Shackle, 1979: 86); these latter are considered *perfectly possible* outcomes. Such outcomes can be associated therefore with a zero degree of *potential surprise*, for no doubt or disbelief arises when the producer considers the possibility of their future occurrence.

The surprise is potential because it represents the degree of disbelief felt now associated with the possible occurrence of a particular outcome in the future. Therefore, it is a completely different feeling from that which depicts what an agent experiences at the moment when an outcome

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46 "By *focus-hypothesis* or *focus-element* we mean an element ... which has some special and extraordinary power to command and concentrate upon itself the decision-maker's attention. In what we shall present as a centrally important group of cases, there will be two focus-elements, one selecting itself from amongst the hypotheses of success and the other from amongst the hypotheses of misfortune" (Shackle, 1961: 122).
actually happens. As Shackle (1961: 68) puts it, potential surprise "is the surprise we should feel, if the given thing did happen".

Outside the area of perfectly possible terms of convertibility of a specific asset into money there are other outcomes that, if they should happen, would cause some degree of surprise to the producer who decides to keep that asset as store of value, despite the existence of no "fatal obstruction" for their occurrence. Accordingly, these outcomes are associated with a greater than zero degree of potential surprise. To yet further outcomes are attached higher degrees of potential surprise, reaching a maximum for those outcomes the producer believes to be impossible.

In sum, possibleness is no longer treated merely as a category, but as a variable. If one considers the horizontal axis of a diagram (Figure 2.1) as representing the imagined possible terms of immediate convertibility of a specific asset into the accepted means of payment and the vertical axis as representing the degrees of surprise that each of these particular sequels would provoke if they became true in the future, one can draw the curve of a producer's potential surprise associated with the possible outcomes of the decision to keep a certain asset as store of value. The range of definition of the potential surprise function for a particular producer "will lie between entire possibility and non-possibility, and these two are the natural bounds of what we may call the epistemic interval" (Shackle, 1988: 4).

In the preliminary discussion, the interval of perfectly possible outcomes (the area between $x_1$ and $x_2$ in Figure 2.1) limited the evaluation of the producer. With the addition of the potential surprise function, the central argument can be restated as follows. As before, the producer will assess some of the outcomes which lie around the neutral outcome associated
with the decision of maintaining a particular asset as store of value as perfectly possible outcomes; the outcomes which lie inside this interval are all associated with a zero degree of potential surprise. Conversely, gains or losses larger than those included within the limits of this interval (but still lying within the range of outcomes judged possible) are deemed less than perfectly possible terms of convertibility, thereby being associated with positive degrees of potential surprise. The larger the gain or loss associated with a specific outcome outside that interval, the more surprise the producer feels he would experience if this outcome happened to become true in the future.

When only the range of zero potential surprise was being considered (possibility being treated as a category, not as a variable), only the largest (net) loss and the largest (net) gain arrested the attention of the producer. With the introduction of degrees of potential surprise, the matter of focus becomes more complex. For while a large deviation from the neutral outcome is more surprising, outcomes with high potential surprise also have less power to command the producer’s attention, just because they are deemed so unlikely to occur. In this more complete context, the determination of the outcomes which will most arrest the attention of the producer (i.e. the focus elements) when evaluating a specific asset will depend not only on the desiredness or counter-desiredness associated with each particular outcome, but also on the degree of possibleness which a particular producer, to the best of his knowledge, attaches to each deemed possible outcome. Therefore, the attention-arresting power of the outcomes, which Shackle (ibid.: 5-6) calls ascendency, “will assuredly be an increasing function of desiredness, and a decreasing function of potential surprise. There will be, within some range of greater or less desiredness, a constrained maximum of ascendency; and again within some range of greater
or less counter-desiredness, another such constrained maximum”.

The ascendency function \( A \) can be represented in a two dimensional diagram as a set of equal-ascendency curves (Figure 2.2). Each of these curves connects points \((x, y)\) such that the corresponding values of \( A \) are equal. Furthermore, as the increasing attractiveness of larger gains or losses is compensated by the increasing degree of disbelief assigned to the possibility of these outcomes occurring in the future, the equal-ascendency curves must slope north-eastwards or north-westwards (Shackle, 1970: 118). Thus, if one superposes the potential surprise function \( y \) upon the equal-ascendency map, there will be two points of tangency between this curve and the equal-ascendency curves, one in the positive and other in the negative range of valuations (Figure 2.3). These two points represent the two constrained maxima of ascendency associated with a specific set of outcomes, which, except from extreme coincidence, are not symmetrical around the neutral outcome. They refer to different levels of disbelief. By replacing these points by those which lie in the same equal-ascendency curve but which also lie upon the \( x \) axis, it is possible to determine the standardized focal hypotheses, which will describe a specific asset for a particular agent (Shackle, 1979: 107).

The standardisation allows the focal expected gains and losses of different assets to be compared and the assets to be ranked by their combination of liquidity and return. If one considers the segment of gains depicted in the diagram of the potential surprise function, it follows from what was said above that the larger the gains associated with particular outcomes, the higher the combination of flexibility and financial or other return that the possession of that specific asset gives to the producer and, consequently, the more desired the outcome in the producer’s mind. In other words, the more favourable the expected terms of immediate
convertibility of an asset into money the greater its capacity to arrest the attention of the producer. This evaluation, however, is constrained by the degree of potential surprise attached to each of the possible outcomes, for the larger the expected gains, the higher the degree of disbelief associated with its accomplishment in the future and, therefore, the less its capacity to arrest the attention of the producer. Accordingly, these two elements will, simultaneously considered, determine the best outcome (focus gain), one of the two which will command the producer's attention when the possibility of maintaining a specific asset as store of value is being considered.

By similar reasoning, the producer develops a focus loss - the worst outcome he can imagine which is still sufficiently likely to command his attention. If one contemplates the segment of losses of the potential surprise function, it is obvious that the less favourable the terms at which the asset is expected to be immediately exchanged for money in the future, the more counter-desired it seems to the producer and, consequently, the worse the outcome is considered. Conversely, however, the larger the expected loss associated with the ownership of a specific asset, the higher the degree of potential surprise assigned to the occurrence of that result and, therefore, the weaker its capacity to arrest the attention of the producer. As a consequence, the combination of these two distinct magnitudes (i.e. the terms of convertibility and the degree of potential surprise) provides the producer with the elements necessary to regard one particular outcome as the worst of all.

Thus, through the ascendency or attention-arresting function it is possible to define the pair of outcomes which depicts the effective possibility of gains and losses associated with the decision to keep a specific asset as store of value. These two magnitudes are the standardized
focus gain and focus loss and represent the extreme values of the deemed possible outcomes which arrest the attention of the producer. As Shackle (1988a: 5) puts it, "[t]he chooser of action wishes to fix upon the best and the worst imagined outcome of each action that are possible enough: the best that is possible enough to be worth hoping for, and the worst that is too possible to be dismissed".

Once the producer has defined such a pair of standardized outcomes for each of the assets under consideration, he can compare the distinct pairs to each other and rank the assets in a spectrum of liquidity. In order to understand the rationale of this ranking, one can think in terms of a diagram (Figure 2.4) in which the values of the horizontal axis stand for the focus losses whereas the values of the vertical axis stand for the focus gains. Any combination of a focus loss and a focus gain (i.e. a pair of expected terms of convertibility) can be represented by a point in such a space. If one links the points which represent situations which are indifferent for a specific producer, i.e. which are "equally attractive or equally repellent" for a producer "with his particular temperament, tastes and material endowments" (Shackle, 1979: 101), one can form "gambler indifference curves". All these curves taken together, in turn, constitute what Shackle (1961: 164) calls the "gambler indifference map". Therefore, one can decide between two or more distinct assets in terms of the liquidity which one attaches to them according to the position that the point which represents each specific asset occupies in the indifference map.

It must be noted that the map is truncated: for each particular producer at each moment in time, there exists an outcome which represents the maximum sustainable loss (ibid.); any larger loss would exceed the minimum of safety the producer needs to avoid bankruptcy in case of
unexpected events. Assuming that bankruptcy is an outcome he will do his utmost to avoid, options giving likely outcomes beyond this barrier are not even considered. In other words, all of the assets which are associated with a focus loss larger than that represented by the maximum sustainable loss are not even taken into account by the producer, for if the terms of immediate convertibility illustrated by that point happened to become true, the producer would face financial ruin.

Once this limit is established, the assets may be ordered according to the degree of liquidity a particular producer assigns to them. The position that each of the pairs of focus gain/focus loss (i.e. a point) occupies in the gambler indifference map indicates how the assets are ranked in relation to each other. Thus, in the relevant area of the diagram, for any two points, each representing the liquidity attached to a particular asset, having the same ordinate but distinct abscissas, the one with smaller abscissa is considered as possessing a higher degree of liquidity that the other. This is so because it has the same focus gain but a smaller focus loss associated with, which, from the producer's viewpoint, provides more security against the uncertainties of the future. Conversely, if two points have the same abscissa but different ordinates, the one with the larger ordinate is ranked by the producer as more liquid than the other one, for although they both possess the same focus loss, the former is associated with a larger focus gain. Thus, applying Shackle's (1979: 102) general reasoning to the specific question under consideration, one can say that any asset whose pair of focus gain/focus loss is in a curve lying north-westward of another curve will be ranked as more liquid than any other asset whose pair of focus gain/focus loss lies on the more south-eastward lying curve.

To proceed from ranking assets in order of their liquidity-benefit
to choosing a set of assets with liquidity as a key property, it is necessary something akin to a budget restraint, which Shackle (1961: 164) calls a "gambler opportunity curve". Given the amount of wealth the producer is prepared to hold in realisable form, i.e. excluding non-marketable assets, one can construct such a curve between the point of complete liquidity (normally money) and maximum focus loss. The gambler opportunity curve gives the various combinations of assets which the producer can afford. The gambler indifference map and opportunity curve are put together in Figure 2.5. The optimal choice of assets from the point of view of the producer's expectation of liquidity and return from his wealth is given by the tangency between the gambler opportunity curve and the gambler indifference map.47

Therefore, using Shackle's theory of expectations one can understand how - even in an environment of uncertainty in which expectations about the outcomes of keeping distinct assets because of their liquidity cannot be assessed through the use of probability theory - a producer can rank these assets in the spectrum of liquidity, so that he can subsequently choose those ones which better fulfil his particular needs for liquidity. More importantly, this can be done without substituting an implicit assumption of (at least probabilistic) knowledge for uncertainty.

The suitability of Shackle's theory of expectations to understand the ranking of assets in terms of the liquidity assigned to them is particularly evident when the most illiquid assets of the relevant spectrum of liquidity are considered. This is so because the degree of liquidity of

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47 Ideally, the gambler indifference map and opportunity curve would be portrayed in many dimensions, so that the importance of real use-value could be taken into account. However, even the outcomes have been reduced to their money value, they are still compatible with portfolio diversification, as different assets may share the same pair of focus gains and losses, so that a point choice may involve diversification (Anjos Jr. and Chick, 1993: 29-30).
those assets can only be assessed if the high degree of "cruciality" involved in the decision to hold them as store of value is taken into account. But despite its importance, one could argue for the adequateness of classical probability theory to understand the ranking of the most liquid assets in the spectrum of liquidity. It can be claimed that the price variation of the most liquid assets stays within some well-defined bound for such a considerable period of time that there is no anticipated surprise. That is, the outcomes of maintaining some assets as store of value may be so stable over time that producers are inclined to think that the outcomes that occurred in the past are the same as those which will come to pass in the future; i.e. all possibilities are assumed to be known. This happens either because their markets are more subject to regulation (which imposes a certain stability) or because their markets are so large and their use so widespread that a certain degree of continuity is expected. If this is so, the decision to choose some of the most liquid assets as store of value is associated with a small degree of cruciality (i.e. the changes in their markets provoked by a single transaction are too small to have an important impact on their operation in the future). As a consequence, expectations concerning the outcomes of choosing the most liquid assets to perform the store-of-value function of money could be modelled probabilistically. At the opposite extreme of the spectrum of liquidity, however, markets are often not stable, for individual sales may transform them in a way that makes the use of past records to form expectations concerning the future inappropriate. In this case, the decisions to maintain the least liquid assets as store of value possess a high degree of cruciality.

It suggests at least an area of accommodation between the two approaches in the matter of liquidity (probability theory for the least
crucial decisions and Shackle's theory for the most crucial decisions). Although appealing, such a division of applicability of theories of expectations is nevertheless problematic. The main reason for the inadequacy of this arrangement is the fact that the most liquid and the most illiquid assets do not form two well-defined and separate groups. In fact, there is continuity along the whole spectrum of liquidity, for cruciality is a matter of degree. In the middle of these two groups of assets there are the more or less liquid assets (which compose the bulk of the whole set of available assets), and about their prices one cannot say with any degree of certainty if they are or are not stable over time; i.e. if the future operation of their markets can or cannot be expected to follow the patterns observed in the past. The only thing possible to affirm is that along the spectrum of liquidity the degree of cruciality increases. Accordingly, one cannot know (exactly or even approximately) which degree of cruciality associated with a specific asset (and therefore associated with the operation of its market) is too high to make probability theory useless to assess its functioning in the future.

It is the existence of this "grey area" in the spectrum of liquidity that makes the use of the two distinct theories of expectations certainly difficult and perhaps inapplicable to an understanding of the ranking of the whole set of available assets according to the liquidity assigned to them. If these two theories were to be used, one would have to define in which point of the spectrum one would give place to the other; i.e. one would have to decide, within the spectrum, which asset possesses a market unstable enough to make probability theory useless when expectations about its behaviour in the future are being formed. However, if one is able to point out this asset, it would mean that the ranking of the assets is already established, which, given the existence of the markets within the
grey area, is a contradiction.

Thus, the only way to appreciate the ordering of the whole range of the assets — and not only a particular group — in terms of the liquidity attached to them is to adopt a theory applicable to all available assets in the spectrum of liquidity. And although it is not possible to extend the use of probability theory to form expectations about the operation of the changing or less stable markets, the contrary is not true. Shackle's theory of expectations is general enough to understand the producers' rationale when forming expectations concerning the functioning of the markets of the whole set of assets available, regardless of the degree of cruciality associated with their operation. The adoption of Shackle's theory of expectations promotes the unification of the spectrum of liquidity, for not only are the assets which lie in the extremes ranked, but also those which lie in the grey area.

From this alternative approach, and going back to the central idea of this section, one can say that one of the necessary conditions for maintaining money as an institution is that at least one asset must be expected to have its focus loss (i.e. its worst expected terms of convertibility into money) to the left of the maximum sustainable loss depicted in the indifference map. This would provide producers with confidence in the fact that their needs for liquidity can be attained if they store value in terms of that asset, therefore freeing them from the fear of making monetary contracts in an environment of uncertainty.

This criterion highlights the importance of maintaining the operation of the market institutions which regulate the process of convertibility between the distinct assets into money as stable as possible, so that the uncertainty involved in the process of choosing assets to be kept as store of value can be reduced. This is so because the more stable these
institutions over time, the higher the confidence of the producers in their expectations about the behaviour of specific markets in the future. Also, the higher that confidence, the narrower the range of outcomes deemed as possible to occur in the future as a result of the decision of keeping a specific asset as store of value and the narrower the sub-set of outcomes from that range deemed as perfectly possible to occur. As a consequence, the stabilization of those institutions may induce a change of the focal outcomes associated with specific assets, thereby provoking changes in the evaluation of the degree of liquidity attached to them. As a response to a more stable environment, then, some assets may be repositioned to a better place in the gambler indifference map of a specific producer and assets which were not even taken into account may be brought inside the relevant area of the map. Therefore, the more stable the market institutions the wider and more precise the choice of assets to perform the store-of-value function of money.

It is important to note, however, that to maintain the stability of the process of convertibility of the assets which are kept as store of value into those instruments which act as means of payment is more complicated than to maintain the stability of the relation of representativeness between the diverse instruments which function as means of payment and the concrete embodiment of the standard of value (state money). This is so due to the more unstable nature of the institutions which regulate the former process as compared to those which regulate the latter one. Whereas the relation of representativeness between the instruments which act as means of payment and state money complies with specific rules and regulations, the convertibility of the assets used as store of value into the means of payment does not. Instead, the convertibility of most of the assets held as store of value depends on the
functioning of non-regulated markets in specific moments of time in the
future, which widens the expected deviations of the future terms of
convertibility from the ones observed in the present.
figure 2.1

figure 2.2

figure 2.3

= degree of potential surprise of focus loss
= degree of potential surprise of focus gain
= standardised focus loss
= standardised focus gain
= focus gains
= focus losses
= maximum sustainable loss
= gambler opportunity curve
3.1 Introduction

Only money is capable of organizing contractual relations in capitalist economies. The reasons for this pivotal role of money are, as discussed in the preceding chapter, three-fold. Firstly, contractual values are only socially recognizable if established in terms of money. Secondly, contracts can only be properly discharged through the use of the socially accepted and legally enforced representatives of money. Thirdly, to prevent themselves from not being able to honour contractual debts due the occurrence of unforeseen facts, the producers must keep command over money through time. In this sense, money serves distinct although articulated ends: money serves as a standard of value, as a means of payment and as a store of value. These are the main functions of money, its "purpose" as a social institution (Polanyi, 1977: 97).

This multifarious character of money has led some authors to search for the ultimate function of money, that which would both surpass and encompass the other functions in terms of importance for the establishment of contractual relations. Clower (1969a: 14), for example, asserts that to be "means of payment for all other commodities" is the "primary function" of money, all of the others functions being "incidental" to that one. Rousseas (1986: 22), in turn, emphasizes the importance of the store-of-value function, because of the radical uncertainty in which the contractual relations are immersed. However, if such a hierarchical ordering of the functions of money is to be produced, it is the standard-of-value function that should come first. This is so because, as already extensively argued, exchanges can only be carried out if contractual values are defined in
monetary terms.¹

The importance of both this analytical distinction between the functions of money and their hierarchical classification lies in emphasizing the monetary character of exchange relations. However, as will be argued, if money is to be trusted as a social operator over time, the unity of its functions has to be maintained. That is, despite the multidimensional character of money, money can only be maintained as one of the central institutions which provide the necessary conditions to promote social cohesion in modern capitalist economies if the unity of its functions is preserved. In this context, the first aim of this chapter is to detail the concept of unity of the functions of money (section 3.2). Built on this concept, the present approach clearly opposes the textbook view which simply juxtaposes the functions of money without analysing their complementary nature and the importance of their unity for the material reproduction of modern capitalist economies. Secondly, both the institutional role of money and the conditions under which the unity of the functions of money can be maintained are examined in detail, so that, by contrast, one can identify which events may threaten that unity and discuss the space for state intervention to counteract those disruptive events (section 3.3).

¹Although taking the standard-of-value function of money for granted for the most part of his work, Keynes (1971a: 3) is categorical when affirms that "[m]oney itself, namely that by delivery of which debt contracts and price contracts are discharged, and in the shape of which a store of general purchasing power is held, derives its character from its relationship to the money of account, since the debts and prices must first have been expressed in terms of the latter. Something which is merely used as a convenient medium of exchange on the spot may approach to being money, inasmuch as it may represent a means of holding general purchasing power. But if this is all, we have scarcely emerged from the stage of barter. Money proper in the full sense of the term can only exist in relation to a money of account". In the same manner, Polanyi (1977: 108) asserts that "neither barter nor storage can be effectively carried out in the absence of some standard of value or money of account".
3.2 Complementarity and Unity of the Functions of Money

The functions of money taken together create the conditions for the existence of channels of communication between independent private agents. This is so because these channels—contractual relations—are tri-dimensional processes which require something to be used as (i) standard of value, (ii) means of payment, and (iii) store of value. Accordingly, there is complementarity between the distinct functions of money, for they are integrated into the form of an institution capable of coping with the complexities of the contractual relations in capitalist economies. In other words, it is the complementarity between those functions that provides the producers with codes and rules which enable them both to establish and to discharge contractual commitments over time. Moreover, the complementary character of the functions of money demonstrates the inadequateness of a partial analyses of money. Although the functional distinction is necessary, each particular function of money must be integrated with the others if money is to be understood as a single and purposeful institution; i.e. as an institution which makes social cohesion in capitalist economies a possible result of the search for private wealth.²

² For a position contrary to this view, see Fama (1980), whose proposal for deregulation of the banking system also includes the possibility (and the desirability) of the complete separation of the functions of money, so that the indeterminacy of monetary systems could be avoided. Fama (ibid.: 55) illustrates his proposal with a parable of an "advanced society" in an "enlightened age", in which "terms like money, medium of exchange, means of payment, and temporary abode of purchasing power have long ago fallen from its vocabulary, and all written accounts of the ancient 'monetary age' were long ago recycled as part of an ecology movement". In such a hypothetical society, all transactions would be carried out through an account system of exchange provided by private banks. Also, a physical good would be used as numeraire, for the use of a merely nominal commodity for performing this function would require the regulation of the State and so would introduce an element of instability into the system.

Besides the obscurantism disguised as the ecological preoccupation of an "enlightened" society that erases its history, the main flaw of Fama's proposal is that it cannot be applied to market economies. By denying the importance of the functions of money and proposing that
Ideally, all functions should be fused into one and the same asset. The same asset kept as store of value and used to discharge payments should be the standard in terms of which contracts are established. In this hypothetical situation, all contracts would be established in terms of the national currency and discharged through the delivery of the concrete representatives of that currency (notes and coins). Similarly, those representatives would be kept over time as store of value and used as means of payment whenever necessary. In this way, there would be no questioning about the complementary character of the functions of money and its role as an institution; i.e. money would provide the producers with all the information necessary for the operation of the productive sphere.

In modern market economies, however, this is not the case; instead, many distinct assets are employed to fulfil the basic functions of money. When it comes to the means-of-payment function, there are several representatives of the national currency — other than notes and coins — which are equally accepted to discharge contracts (cheques, credit cards, etc.). Similarly, a great number of assets (either financial or physical) are used as store of value because of the liquidity assigned to them (financial assets, foreign currencies, gold, etc.). In such an environment, the "things" which perform the functions of money must be expected to be converted into each other at stable and acceptable terms to maintain their complementarity. On the one hand, the "things" used as store of value must be expected to be exchanged for those which act as means of payment in terms compatible with the producer's future needs for purchasing power, exchange relations should be carried out through an account system which uses a physical good as standard of value (i.e. by denying the complementary character of the functions of money), Fama simultaneously denies any central role to be played by money as an institution. It may even be that future societies will not be monetary ones, but then they will not be market economies either.
according to his expectations at the moment contracts are established. On the other hand, the "things" which are supposed to serve as means of payment must be expected to be referred to the standard of value in stable and known terms if they are to be accepted as concrete representatives of that standard. That is, the delivery of a socially accepted means of payment must be expected to transfer, in definite terms, the wealth which is promised to be transferred in monetary contracts.

If there exists widespread confidence in the stability of (i) the process of convertibility between the assets used as store of value and those accepted as means of payment and (ii) the relation of representativeness between the latter assets and the socially accepted standard of value, one can affirm that there is unity of the functions of money. And the stronger the confidence, the stronger the unity. Thus, the unity of the functions of money is being proposed as an ex-ante concept which refers to the belief each individual producer possesses in the ability to employ the different instruments which perform the functions of money as a single institution. Accordingly, the maintenance of the complementarity between the functions of money depends on the endurance of that confidence, for only if it is preserved can money act as the regulator of the contractual relations on which the creation of productive wealth is based. Put another way, to sustain the complementary character of the functions of money in modern capitalist economies — and therefore to sustain money as a social institution — it is necessary to maintain their unity. The preservation of the unity of the functions of money is, thus, an essential condition for the maintenance of a social space (the space of contractual relations) in which some degree of cohesion can be attained in market economies. In this sense, it is the shared belief in the fact that the different "things" which perform the distinct functions of money can
be converted into each other at stable terms that makes money an institution capable of regulating private contracts.\(^3\)

As a corollary, it can be argued that, if that confidence vanishes, the unity of the functions of money is destroyed; and the fragmentation of that unity signifies the laceration of the space of contractual relations, thereby leading the private agents to adopt forms of attaining their desires for wealth other than the activation of the productive circuit. That is, causing a split between private and social wealth and giving space for the violence intrinsic in market relations to replace money as a social operator. As Mollo (1991b: 266, translated by this author) asserts, the disappearance of money as a social operator "means the rupture of the basic rule of social coherence in market economies. And this rupture challenges the other rules and forms of social cohesion, thereby disintegrating all the social tissue". Thus, a monetary crisis can be understood as the situation in which the monetary unity (i.e. the unity of the functions of money) is disrupted and so are the codes and rules which form the social cement of constitutively anarchic market-oriented economies.\(^4\) But to discuss how the unity of the functions of money can be broken implies

\(^3\) One needs to be careful not to identify the unity of the functions of money as a panacea for the problems the generation of productive wealth involves. Although money performs the basic and essential functions necessary for the establishment of contracts, the existence of unity of the functions of money per se is obviously not a sufficient condition for the activation of the productive circuit. For promoting its operation it is also necessary to take into account both the state of expectations of the producers regarding prospective profits and their access to financing mechanisms. But although these conditions and the unity of the functions of money refer to distinct aspects of the process of generating productive wealth in capitalist economies, they are also complementary and self-reinforcing dimensions. Whereas the conditions required for the activation of the productive circuit are only capable of doing so if there is unity between the functions of money, the generation of productive wealth, in turn, helps to strength confidence in that unity.

\(^4\) Chapter 4 will discuss how high inflation progressively ruins this "symbolic system", thereby leading market economies to resemble more and more to archaic economies.
considering first how the confidence in the stability of those institutions can be preserved. Accordingly, a more detailed examination of the institutional character of money is in order.

3.3 Money, Habits and Institutions

At any moment in time each particular producer is confronted with an enormous and variable collection of assets (monetary, financial and even physical) which perform the functions of money. In such a complex environment, contracts can only be established if there exists confidence in the possibility that those assets can be converted into each other in stable terms; i.e. if there is unity of the functions of money. Although it is doubtless that this confidence does exist in stable economies (for contracts are actually both established and discharged in a continuous flux over time) the understanding of its nature may shed some light on the comprehension of the processes of destruction of a monetary order. The ensuing assessment of the processes which allow the emergence and maintenance of this confidence will be undertaken mainly in terms of the institutional approach for economics proposed by Hodgson (1988; 1989).

First of all, the possibility of carefully analysing all the complexities of the environment to gather the maximum of information and therefore to have enough elements to trust or not in the unity of the functions of money must be dismissed as implausible. Given the complexities of the system, the best a producer could obtain through observation would be too much data and too little information. Moreover, decisions are taken within a certain time constraint, which puts a limit on the freedom for meticulous observation. As Hodgson (1988: 116) puts it, "[w]e are bombarded with signals from a complex world in which we have limited time and relevant information with which to act". That rationalist conception of
action, therefore, must be replaced by some other explanation capable of
taking into account the cognitive process carried out in complex social
structures. It is argued in what follows that the information necessary to
form a judgment as to the unity of the functions of money in modern market
economies is provided by institutions.\(^5\) That is, it is argued that the
institutional character of money can only be maintained if additional and
subsidiary institutions convey the information necessary for preserving
confidence in the exchangeability between the instruments which perform the
functions of money. In this sense, as claimed in chapter 1, money is on the
top of the institutional framework on which the generation of productive
wealth depends.

However, to suggest that evaluations and therefore decisions are
moulded and influenced by institutions does not imply disregarding the
importance of the individuals' perceptions and aims. Instead of any
opposition between these two spheres, what is being proposed here is an
integrated view of the cognitive process in complex environments, in which
neither the private nor the social dimensions alone can be considered as
the ultimate determinant of that process.\(^6\) In this sense, although the
unity of the functions of money depends on the confidence of each
individual producer in the information provided by institutions, that
confidence is not the exclusive result of individualistic assessments of
their reliability. Conversely, it is not the exclusive outcome of

\(^5\) Accordingly, institutions are "informational guidelines which are
essential for action in a complex economic environment which is only
partially known and understood" (Hodgson, 1988: 118).

\(^6\) This approach, as Nooteboom (1992: 34) points out, "does not deny
the role of the individual as a source of idiosyncratic ideas and actions,
but it does deny his or her autonomy". In this way, it is the basis for a
theory of "meaning, learning and action that allows for the mutual
interaction between on the one hand collective meanings, perceptions,
interpretations and norms and on the other hand individual parlance,
cognition and action" (ibid.).
structural coercive mechanisms either. Instead, the confidence in money as a social institution depends on the interplay between individuals' perceptions of an ever-evolving social structure and the constraints this social structure creates at any particular moment for individual action. Also, if one understands culture as this general process of interplay between agency and structure whereby individuals' minds are cultivated and specific forms of socialization are built and reproduced, one can say that money is an evolving institution which emerges and exists within specific cultural boundaries. In other words, both the emergence and maintenance of money are cultural phenomena which are intrinsic to the structuration of modern capitalist societies.

Despite their articulation, however, institutions and individual assessments are not always equally important to the construction of the confidence necessary to maintain the unity of the functions of money. In fact, the greater or lesser importance of one or the other of those spheres to the cognition of the relevant information necessary to act depends on the degree of deliberation or consciousness present in the act itself: the more deliberate or the more conscious an action, the more important individual judgment and assessment; the less the degree of deliberation or consciousness, the more important the role of the institutions. And the existing degree of consciousness, deliberation, blindness or sensitivity

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7 The concept of culture as a process which both constitutes and reproduces a "whole way of life" or a "whole social order" is developed by Williams (1981: 12-3). For a defence of a culturally-informed institutional economics employing Williams' definition, see Jackson (1993).

8 The structuration of social systems refers, as Giddens (1984: 25) asserts, to "the modes in which such systems, grounded in the knowledgeable activities of situated actors who draw upon rules and resources in the diversity of action contexts, are produced and reproduced in interaction".

9 For the distinction between degrees of deliberation and consciousness, see Hodgson (1988: 110).
associated with individuals' acts involved in establishing a monetary contract depends, in turn, on the organizational forms of the institutions which order these acts. As Hargreaves Heap (1986-87: 270) suggests, institutions can be classified in two broad groups according to the organizational forms they display and the resulting importance allowed for individual deliberation. The first group comprises those institutions which assume a more "hierarchical" organization, in which "the roles are defined by a series of procedures or instructions which are sufficiently comprehensive so that individual input is minimal" (ibid). As a consequence, the individual possesses a low degree of deliberation about his acts and performs therefore an almost anonymous role. This aspect is reinforced by the fact that hierarchical institutions commonly encompass legal sanctions for those who not comply with their rules, which are generally strong enough to compel the individuals to accept them. The second group of institutions, in turn, is much more affected by individual behaviour, for, as the institutions present fewer regulations and constraints in their organizational form, they allow a wider space of expression for individual consciousness.

Although illuminating, Hargreaves Heap's classification can only indicate the two extremes of a spectrum of different forms in which institutions are organized and, therefore, of distinct degrees of deliberateness possessed by individual agents. In this context, the important point to be made is that the specificity of the mechanisms whereby the interaction between institutions and individual perceptions produces purposeful information depends on the particular organizational features of the institutions: the more "hierarchical" the institution, the weaker the power of individual deliberation; the more "individualist" the institution, the greater the importance of individual actions and
perceptions for the cognitive process. Given this general framework, one can elucidate how confidence in the stability of the two essential relationships between the instruments which perform the functions of money can both emerge and be preserved over time.

The first of these relationships refers to the representativeness between the instruments which act as means of payment and the socially accepted standard of value. When a producer accepts something against the settlement of a contract, he is assuming that that instrument is a socially accepted representative of the standard of value in terms of which the contract was established. That is, he is assuming that a transference of wealth has been carried out at par value and that such transference gives him access to a certain precise amount of general purchasing power. To make such an assumption, however, the producer must possess some information about which instruments must or must not be accepted as means of payment, for otherwise he would be incurring the risk of being paid with virtually worthless assets. The problem, then, is how this information can be gathered and passed on to all the independent producers so that it becomes common knowledge and contractual relations can be both established and discharged over time.

The assets usually employed as means of payment convey, by themselves, some of the required information. First, they bear the name of who issued them: coins and bank notes carry names, symbols or signatures which identify their origin; similarly, cheques, credit cards, and acknowledgments of debt in general display the names of the issuers. Moreover, all these instruments are to some extent protected against falsification. As a result, they are easily recognizable and their genuineness quickly attested. In order to make the relation of representativeness between them and the standard of value explicit, they
normally have their values expressed in terms of that standard. However, all this still leaves the producers with doubts about the capacity of those instruments being concrete representatives of the socially adopted standard of value. That is, the possession of those genuine and money-denominated assets *per se* is guarantee of neither the interchangeability of those instruments at par value nor their capacity to be the embodiment of the standard of value.

This is so because the amount of information required to prove that a certain instrument can or cannot be confidently accepted as a means of payment and the complexity implied in this assessment demand both a computational competence beyond the capacity of decentralized producers in market economies and the availability of long periods of time for evaluating the information, which is incompatible with the time requirements of production in those economies. In other words, given the diversity of instruments employed as means of payment in modern capitalist economies, to deliberate rationally about their reliability would be so complex and so time-demanding that it would lead the exchange process to a state of paralysis. Thus, there is a gap of knowledge which cannot be filled only by individual evaluations about the degree of acceptability of the instruments used as means of payment and the terms by which they are

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10 This complexity is justified by the fact that the generalized acceptance of an asset as means of payment depends on an infinite chain of expectations about the expectations of other agents concerning the acceptance of this asset as such. As Orléan (1992: 123) puts it, "[f]or any agent, *i*, that agent’s acceptance of a worthless sign, money, in exchange for a commodity, depends on that agent’s expectations about the future acceptance of the same sign by another agent, *j*. The particular qualities of the sign hardly matter, for what is essential in determining agent *i*'s decision is *i*'s expectation about the behaviour of *j*. Agent *i* will only take the money if he knows that *j* will accept it in turn one day. But, to the extent that *j*'s acceptance of the money also depends on *j*'s expectations about a new agent, *k*, *i*'s acceptance of money depends on *j*'s expectations about *k*'s acceptance of a monetary sign. It should be obvious that this reasoning hardly stops with agent *k*."
so acceptable. As a consequence, the confidence needed to maintain the relationship of representativeness between standard of value and means of payment cannot be the outcome of careful deliberation by each individual producer.

Instead, it must come as the result of an almost totally unconscious cognitive process, so that a quick and undoubtful recognition can be made. That is, instead of trying to anticipate what the others are going to accept as means of payment, producers must simply refer to a set of common beliefs to decide about the moneyness of specific assets. The information necessary for the actuation of this process can only be conveyed with such precision and rapidity to the producers through institutions, routines and habits. Put in another way, the "sameness" between the distinct instruments which claim to perform the means-of-payment function of money and the socially accepted standard of value can only be "conferred and fixed by institutions" (Douglas, 1987: 53). Moreover, and in accordance with what was discussed in the preceding chapter, it is argued here that the definite guarantee of the authenticity of these institutional devices and the definition of the terms of their exchangeability can only be provided by the State and its institutions, which have both the power and the legitimacy to institute and regulate the mechanisms whereby contracts are established and discharged.\(^{11}\)

\(^{11}\) An example of a simple symbol which evokes a complex cognitive process can be found in the classification of French wines, which conveys reliable, quick and instantly recognizable information: "Naming the wine after the region and the chateau is to condense information that can only be unpacked by connoisseurship. The name encapsulates a tried process, a traditional blend of grapes, a soil, the slope of a valley, and a climate. It defies any other rationalization" (Douglas, 1987: 106).

\(^{12}\) Considering the results of a series of experiments in social psychology, Hodgson (1988: 122) points out the "widespread tendency for social actors to believe in, and accept the authority of, that which is deemed a legitimate order". Besides, the legal system is also identified as an important source of legitimation: "People tend to have particular
The reasons for that are two-fold. First, it is the State which ultimately determines which assets can be used as means of payment. Even though some of them emerge from the private sphere without state interference, they need to be legitimised by the State to be widely accepted without queries about their capacity to act as means of payment. That is, it is the State which determines the terms and conditions under which they can operate as such, establishing norms to be followed by both their issuers and users. Second, it is the State which provides the legal framework in which those assets can be exchanged for each other at some established parity (a clearing system), giving them convertibility. In this institutional setting, a central role is to be played by those assets which are the direct and concrete legal embodiment of the standard of value (state money). To be rendered social meaning, all instruments which claim the quality to serve as a means of payment must be exchangeable for state money at stable terms. This is so because only state money possesses a direct and unquestionable relation with the standard of value (one Pound is always one Pound), the convertibility into it being therefore the proof and the guarantee that the other assets are equally representatives of the general equivalent. As Chick (1992: 141-2) affirms,

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the precondition for acceptability [of privately-issued forms of money] has been confidence in the convertibility of deposits into state-issued money - notes and coin. This

'respect for the law', and the essence of this phenomenon cannot be captured simply by a neoclassical, cost-minimizing, rational choice framework" (ibid.).

13 According to Mollo (1990: 96, translated by this author), "because the money bank is private, it can only socialize the private labour contained in commodities if, as money, it affirms itself as a socially legitimate form of the general equivalent... The [social] quality of these [private] monies depends on their convertibility into another, hierarchically superior, money: the national money issued by the Central Bank".
convertibility came to be supported by central banks, providing state money as lenders of last resort. This function of central banks greatly adds to the unification and stability of the monetary and financial system.

Thus, confidence in the relation of representativeness between the assets which act as means of payment and the standard of value that operates as the general equivalent of wealth depends on confidence in the capacity of the State to organize and maintain a set of institutions designed to guarantee that relation. Conversely, that confidence has to be enforced and confirmed by state actions to be rendered legitimacy.

The guarantee of representativeness, however, does not have to be verified all the time an asset is being used to discharge a contract. There is a body of common knowledge, shared by all the participants of the market and written in law, which identifies the conditions for using those instruments as means of payment. Such knowledge arises from the continuous use of particular forms of money which "both reflects and enhances, in a self-reinforcing manner, acceptability based on social consensus" (ibid.: 142).\(^{14}\) As long as producers are accustomed to those conditions they become a habit to be followed without much deliberation. In other words, although the cognitive process is completely embedded in institutions, the agents end up "forgetting" this fact. As Douglas (1987: 98) asserts, the "high triumph of institutional thinking is to make the institutions completely invisible".\(^{15}\)

\(^{14}\) "The formulation of a contract between two parties more often involves an implicit or explicit reference to a set of norms, customs and rules rather than a detailed negotiation \textit{de novo} over every clause and eventuality" (Hodgson, 1988: 159).

\(^{15}\) The importance of habits for cognitive processes in market economies is emphasized by Hodgson (1989: 106), who affirms that habits provide the agents "with a means of retaining a pattern of behaviour without engaging in global rational calculations involving vast amounts of complex information". Although habits are not necessarily inviolable, "they
Following this reasoning, one can say that the stability of the relation of representativeness between the standard of value and the assets which operate as means of payment rests upon a set of institutionalized routines and habits, which, in turn, are based on the confidence held in the State. That is, it is the continuous trust in the regulatory power of the State as the guarantor of that relation that maintains its stability over time. Moreover, as "[c]oherence and complexity in public memory will tend to correspond to coherence and complexity at the social level" (ibid.: 80), the stronger the capacity of the State to confirm that stability for each particular producer, the stronger the confidence in the social conventions which sustain the relation of representativeness. Thus, it can be argued that the repeated acceptance of specific assets as means of payment under certain restrictive conditions set by the State tends to make such acceptance a habit, an action which the producers no longer deliberate over. And as long as this habit is conserved as such, one of the conditions for maintaining the unity of the functions of money is attained: the existence of unbroken confidence in the stability of the relation of representativeness between the assets which act as means of payment and the standard of value.

To understand the conditions which must be observed to conserve money as a social institution, however, it is also necessary to examine the other basic condition for maintaining the unity of the functions of money: to maintain confidence in the stability of the process of convertibility between the assets chosen to serve as store of value and those employed as means of payment. To clarify the nature of this confidence, one must help agents to estimate the potential actions of others" (ibid.: 109).

This is in accordance with Douglas's (1987: 46) claim that "[f]or a convention to turn into a legitimate social institution it needs a parallel cognitive convention to sustain it".
initially recall that a producer can only choose some specific assets to perform the store-of-value function of money if he manages to rank them in terms of their ability to preserve general purchasing power over time in case of immediate selling. Also, to build such a classification a producer needs to form expectations about the prices the assets will fetch at any moment in the future; i.e. expectations of potential gains or losses associated with the maintenance of an asset as store of value. To make such an evaluation, however, requires the prior establishment of expected price norms "in the minds and practices of agents" (Hodgson, 1989: 111-2), for, in the absence of such norms, there would be no reference point for the assessment of gains and losses, so that any personal judgment would be meaningless. In other words, any expected range of prices depicting possible gains or losses associated with the decision of keeping a particular asset as store of value has significance only to the extent that it refers to a price or a range of prices which are deemed as perfectly possible by the producer.

Moreover, the maintenance of the unity of the functions of money requires the producers to have a high degree of confidence both in the expected price norms and in their expectations about the prices (social values) that the assets used as store of value can fetch in the future. Only if the producers have confidence in their expectations will they make contractual commitments that, because of the intrinsic uncertainty involved, may require a quick access - at any time in the future - to the socially accepted means of payment. However, as the future behaviour of the markets where those assets are transacted is equally uncertain and relative prices move restlessly over time, it is necessary to discuss both how expected price norms emerge and how the producers can build confidence in their expectations.
It could be suggested that the expected price norms are based on the observation of the past behaviour of the prices, so that some probabilistic analysis could provide the producers with the relevant information. By the same token, it could be accepted that the degree of confidence of the producers in their expectations could be established through probabilistic methods. However, continuous changes in the environment in which transactions are effected and changes in the perception of this environment in producers' minds make the probabilistic treatment of this information inadequate for the formation of expectations. In this context, it is argued that expected price norms and the confidence of the producers in their expectations can only emerge and be preserved through the interplay between the information provided by market institutions and the producers' evaluations of their meaning and importance.

These institutions consist of the established and customary forms in which trading is structured, the legal regulations which confine the producers' actions within some boundaries, the mechanisms for publishing data concerning both the past and present behaviour of specific markets, etc. By organizing and legitimizing exchange relations, market institutions "help to both regulate and establish a consensus over prices and, more generally, to communicate information regarding products, prices, quantities, potential buyers and potential sellers" (Hodgson, 1988: 174). That is, the information provided by market institutions serves as a guideline for the individual producer to create expected price norms, which will give meaning to his expectations of potential gains and losses.

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17 This point is discussed in chapter 2.

18 This point is also made by Kregel (1980: 46), who asserts that "[t]he system reacts to the absence of the information the market cannot provide by creating uncertainty-reducing institutions: wage-contracts, debt contracts, supply agreements, administered prices, trading agreements".
Further, although the degree to which the information provided by these institutions can be purposefully utilized varies according to the degree of volatility of distinct markets, "even in a potentially volatile market where dramatic price changes are possible, trading is structured and information is published selectively so as to help the formation of price expectations and norms" (Hodgson, 1989: 113). In this sense, the concept of price norms highlights the conventional nature of prices: as opposed to the claim made by General Equilibrium models, relative prices are not the outcome of individualistic evaluations of the real value of the assets. Actually, the expected (monetary) prices of the assets (and therefore their relative dimension) are ever-evolving social conventions rooted in history. Thus, prices deemed as perfectly possible of occurring at a certain moment (i.e. price norms) are the outcome of the interplay between institutions and individual assessments of the information they provide.

Furthermore, the stability of these institutions can foster the progressive stabilization of the expectations themselves, thereby promoting an interplay between individual evaluations of the informational content of market institutions and the moulding of those evaluations by the institutions. Accordingly, market institutions have an important function not only in establishing price norms, which are progressively accepted by the agents as a convention to be followed without full deliberation; through their interaction with the producers' assessments about their

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It is worth noting that in spite of the importance of legal market mechanisms, which protect the parties involved in an exchange through regulations and sanctions, their non-existence in "black" markets does not deprive these markets from their capacity to convey meaningful information for the transactors. As Hodgson (1988: 176-7) affirms, "[t]he very fact that they [the 'black' markets] are illegal means that there have to be carefully designed or suitably evolved mechanisms for making contacts, vetting participants, and developing the trust that no-one will inform the authorities. An established black market will have all these things, its own customs, and patterns of routine behaviour, making it an institution in its own right".
meaning, they may also provoke a progressive convergence of private expectations towards the expected price norm and increase the confidence of producers in their private expectations concerning prospective gains or losses associated with the storage of value in terms of assets other than money. Also, the more stable the market institutions the more meaningful and trustworthy the information they provide. Therefore, it is through the interplay between those institutions and the producers' expectations that confidence in the stability of the process of convertibility between the assets which serve as store of value and those employed as means of payment emerges.

Thus, the unity of the functions of money is based on the existence of widespread confidence in the stability of two sets of institutions. The first is that which regulates the relationship of representativeness between the standard of value and the means of payment enforced by law. The importance of this element of confidence refers to the fact that it lulls the fears of the producer who expects to receive those means of payment as a settlement of a contract regarding their ability to act as the general representatives of the purchasing power promised to be transferred when the contract was established. The second set of institutions is that which delimits the operation of specific markets, thereby helping the producers to create stable expectations about the future terms of convertibility of the assets which can be used as store of value into those which act as means of payment. The maintenance of confidence in the stability of this set of institutions placates the fears of the agents as to possible difficulties in having access to the socially accepted means of payment whenever necessary in the future. In this way, the instruments which act as means of payment are the link between the two sets of institutions: assets which serve as store of value must be expected to be converted into
the means of payment only because these, in turn, are expected to be accepted as the concrete representatives of the standard of value.

The confidence in the stability of these two sets of institutions emerges as the outcome of the interplay among economic, political, social and cultural elements, such as market structures, legal regulations, habits, routines, national and regional customs, etc.; i.e. as the result of the interaction between market and non-market mechanisms which mould each other over time. Through that interplay information is passed on and, as its accuracy and importance is recurrently confirmed by the way events evolve, confidence is reinforced, thereby transforming that information in conventions to be followed by the producers when establishing contractual relations. Indeed, as these institutions and practices embody common values, a set of shared beliefs and claims which continually legitimate their forms, one can say that the degree of reliability of the information provided by institutions is culturally bounded. Accordingly, every private producer knows that the assets he accepts as means of payment and those he uses as store of value will be respectively accepted as means of payment by the other agents and converted into the legal means of payment at stable terms whenever necessary. In this sense, the conventions so created act as constraints on the behaviour of producers, thereby serving as a basis over which the confidence in money as an institution can be erected. Actually, because these both formal and informal institutions convey essential information for the emergence of a shared belief in the stability of the relations of representativeness and convertibility between the assets which perform the functions of money, they free the producers from some of the uncertainties intrinsic to market economies.

Therefore, conventional behaviour both emerges and is maintained as the outcome of an interactive process between expectations about the
uncertain future and the information conveyed by institutions rooted in the past. It is the confidence in its continuity that promotes the unity of the functions of money, thereby creating a social space (the space of contractual relations) in which distinct interests can converge towards the same process, the activation of the productive sphere. However, as these conventions are based on "so flimsy a foundation" (Keynes, 1973c: 114), there is always the risk of rupture of that social space. If the processes which sustain the unity of the functions of money, through the relations of representativeness and convertibility of assets, suffer a breakdown, confidence in the continuity of the social conventions which mould private behaviour and placate the fears of producers who have to establish contracts may be shaken.

It is in the nature of the mechanisms which maintain money as a social operator that there is always a "tension between institutional stability and structural breaks..." (Hodgson, 1988: 139), for those mechanisms depend on conventions based on the interaction between the informational content of habits and institutions and deliberative action. This tension can be better understood through an analogy between money and language.

Although differing in the purposes served and the signs employed, money and language share some properties, for both are semantic systems which convey information (Polanyi, 1977: 97). The major purpose of money is to serve as an institution capable of creating a space — the space of contractual relations — whereby private and social aims can be simultaneously attained. In this sense, money is an element of social cohesion, the market language whereby the private producers can both enunciate their desires in a socially intelligible way and search for their attainment without destroying the social framework in which they are
inserted. Much to the contrary, by generating wealth through the productive sphere, the private producers both reproduce and reinforce the social and economic structure which guarantees, as a last resort, their own endurance.

The signs money uses to transmit information are the set of assets which perform the functions of money. Although the composition of this set may vary largely from time to time and from one place to other, the crucial condition which must be observed to keep money as a social operator is the confidence in the unity of those symbols, for only as a unity can the information they convey acquire social meaning and the complementary character of the functions of money be affirmed. In other words, only if the "inter-subjective order based on conventionally accepted relations and combinations of linguistic elements" (Nooteboom, 1992: 37) is preserved can money be maintained as a social institution. The problem, however, is that, in the same way that individuals are restlessly introducing new usages for linguistic terms (ibid.), the search for the attainment of private desires prompts new uses for the assets which perform the functions of money. And once largely adopted, those changes cause "reverberations through the coherent structure" of the market language. Although both language and money are flexible enough (to a variable extent) to allow deviant uses of its constitutive elements, radical and widespread shifts in usage may break the established conventional order. Thus, the private misuse of the instruments which perform the functions of money may - under certain circumstances - raise doubts about their ability to serve their social purpose.

Conversely, however, it must be noted that the disruption of the confidence in the unity of the functions of money may also arise directly from the institutional structure that organizes the relations of representativeness and convertibility between the instruments which act as
money. In this case, the instability of the shared conventions and beliefs is directly provoked by the deterioration of the social sphere, so that the private producers are denied a stable code of rules to express their desires and motives. Nevertheless, whatever the origin of the disruptive process, the crucial point is that, if confidence in the continuance of institutional stability is shaken, the relevance of the information provided by habits and institutions is questioned and so is the role of money as a social institution. That is, without widespread confidence in the stability of the mechanisms which regulate both the uses and the exchangeability of the instruments which perform the functions of money, the sum of these cannot be treated as a single social institution.

The distinct nature of the two processes which menace the confidence in the stability of the two sets of institutions that sustain the unity of the functions of money expresses the different degrees of individual deliberation producers enjoy in each of those sets of institutions. For those institutions which regulate the relation of representativeness between the instruments which perform the means-of-payment function and the standard of value, individuals possess a very low degree of deliberation. This is so because most of these institutions are regulated and enforced by the State, which further stimulates the agents to conform to these rules through a set of sanctions for those who break it. Thus, as long as this set of institutions is simultaneously imposed on and accepted by the members of a society, they are unlikely to be threatened by individual questionings about the reliability of the information they convey. However, and because of their own nature, these organizational forms are very sensitive to external events (e.g. a change of government, an external relation crisis, the deterioration of public finances, etc.), which may threaten the way institutions are structured (Hargreaves Heap, 1986-7: 129).
270). As a consequence, any external event which weakens confidence in the capacity of the State to organize and keep the stability of that relation of representativeness can threaten the trust in the information that the related institutions provide. Moreover, it is important to point out that the misuse of those institutions by the State itself may equally undermine the confidence in its capacity to maintain the stability of that relation.

The market institutions which regulate the process of convertibility between the assets which act as store of value and those which are legally accepted as means of payment, in turn, possess an organizational form in which a higher degree of individual deliberation is possible. And as the operation of these institutions is much more affected by individual behaviour, they are more subject to internal instability. For instance, the speculative behaviour of a particular agent (or a group of agents) in a specific market may damage, to a variable extent, the informational content of those institutions, thereby disrupting confidence in the stability of that market in the future. It must be said, however, that different producers may (and probably will) respond to events in different ways. Something which may be deemed worrying by a particular producer for the maintenance of the unity of the functions of money may be considered a normal event by others. For society as a whole, the problem only arises when doubts about that unity become widespread, thereby developing into a shared belief and being incorporated into the culture of the producers.

The monetary order is, therefore, mortal. In the same way that the regularity of the relations of representativeness and convertibility between the diverse instruments which perform the functions of money reinforces the role of money as a social institution, the breakdown of that regularity (or even the fear of a breakdown) causes a progressive distrust in the institutions and habits which serve as guidelines for individual
behaviour. In such a case of disarray of the socially shared conventions, private evaluations would emerge as the only alternative left. However, as these individual assessments are not capable of gathering and interpreting the information necessary to organize production, private producers would almost certainly end up searching for alternative forms in which their wealth can be reproduced, thus paralysing the productive process. In other words, because the disruption of the unity of the functions of money makes the inescapable tension between private interests and social needs—once repressed by the regulatory power of money—to emerge again, one can say that the decay of the institutional role of money greatly reduces the possibility of achieving social cohesion in modern capitalist economies.

It is within this context of potential instability of the institutions which promote the unity of the functions of money that the interventionist role of the State must be understood. One does not intend to make the case here for the need for state intervention in market economies in general, but only in regard to the maintenance of the confidence in the conventions on which the operation of the institutions is based. Although differing in important aspects, both hierarchical and individualistic types of institutions need some kind of state intervention to remain stable over time. More obviously, the former ones require a continuous enforcement of their roles and of the rules which must prevail if the potentiality of disruption associated with their functioning is to be controlled. Moreover, the State must display institutional protective devices to limit the ability of any external event to damage confidence in the State as the guarantor of the unity of the functions of money. However, neither the enforcement nor the protective measures should be rigid to the

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20 For some of the reasons why the maintenance of the free market economy entails the active presence of the State, see chapter 2.
point of forcing the producers to look for other organizational structures outside the social framework in which the private and social wealth can be simultaneously generated. Instead, they must be flexible enough to adapt to the new demands and questionings, thereby providing producers with an evolving institutional environment, which, in spite of this ever-changing character (and because of it), is capable of maintaining the hierarchical structure which rules the relation of representativeness between the instruments which serve as means of payment and the socially accepted standard of value.

The individualist institutions, in turn, which by their own nature are not subjected to direct intervention, demand a more subtle approach. Although the State is able to use a considerable arsenal of regulatory instruments to restrain the inherently disruptive actions of the private agents even in the less regulated markets (e.g. via changes in the interest rates), the same reasoning outlined above (and with more reason) applies: private agents cannot be put in a straitjacket, which would itself have disruptive effects on the maintenance of the unity of the functions of money. In this case, only a comprehensive and also very flexible set of institutional elements can continuously maintain widespread confidence in the validity of the social conventions. The intensive and careful use of such elements - especially those indicative of tendencies and providing meaningful information for the use of the monetary instruments - have the power to transform some of the cultural assumptions prevailing in the society, thereby persuading private producers of the stability of the mechanisms which regulate the convertibility of the assets used as store of value into those legally accepted as means of payment.
CHAPTER 4. THE EFFECTS OF INFLATION ON THE UNITY OF THE FUNCTIONS OF MONEY

4.1 Introduction

Even though inflation has been widely acknowledged as one of the major problems of capitalist economies in the last decades, there is not much agreement as to its precise causes and effects.\(^1\) This chapter does not intend to add to this debate, for it assumes that both the origins and the evolution of inflationary processes are historically determined, which makes their full comprehension dependent on the consideration of specific economic, social and political aspects. Lack of agreement as to the specific causes and effects of inflation reflects the fact that economic structures not only differ from one country to another but also that they change continuously over time.\(^2\) Thus, although a theory of inflation can prove to be effective to understand one particular situation, it may be incapable of providing convincing answers to another, which makes the attempt to develop the theory of inflation meaningless (Kandir, 1989: 22).\(^3\)

There is, however, one dimension of the inflationary process which is general enough to be analysed independently of the historical context: its capacity to destroy money as an element of social cohesion. Persistent

\(^{1}\) For an account of some of the theories developed with the aim of explaining the nature of inflationary processes, see Frisch (1983).

\(^{2}\) Among those structural changes, one can mention (i) the appearance of new agents (or at least the transformation of the relative importance of old ones), (ii) behavioural modifications of the agents, (iii) emergence of new forms of relationship between the private agents and the State, (iv) the setting of new institutional patterns for both productive and financial activities, and (v) changes in the way each specific country is inserted in an increasingly internationalized world.

\(^{3}\) As Chick (1983: viii) points out, economic theories "are rarely True or False, but they may be judged more or less relevant to the place and time to which they are applied", for "[g]ood theories are relevant abstractions, and relevance alters as history moves on" (ibid: 2).
and rising rates of inflation make the unity of the functions of money progressively weaker, until a state of fragility is reached in which producers can no longer afford to reproduce even a part of their wealth through productive activities; i.e. a state in which the reproduction of private wealth is disconnected from the generation of productive wealth. It is this general dimension of the effects of inflation which will be dealt with in this chapter, so that a qualitative taxonomy of inflation can be proposed.⁴

Low, high and hyperinflation will be associated with distinct stages of the process of disuniting the functions of money, the last of them coinciding with the complete breakdown of that unity and, therefore, with the disappearance of the codes and rules which enable independent agents to agree upon the mechanisms for the generation of productive wealth in capitalist economies. In order to construct such a taxonomy, emphasis will be put on two factors: (i) the institutional and behavioural changes which modern capitalist economies develop as a form of adaptation to inflationary environments and (ii) the limits of such adjustments to maintain the unity of the functions of money over time.

According to this view, hyperinflation is no longer a concept associated with the occurrence of a specific rate of inflation, as Cagan

⁴ Thus, the discussion of the effects of inflation in this chapter is general not only in the sense that it is not concerned with historical specificities (although it provides a framework for the understanding of concrete experiences, provided that the appropriate mediations be made); it is general also for being much less restrictive in theoretical terms than the usual claim that, under inflation, transactors "will not be able to sort out the relevant 'real' price signals from the relative price changes...", therefore making them to lose "all firm conception of where the equilibrium neighbourhood for relative prices lies" (Leijonhufvud, 1981: 259). Besides damaging the information content of market prices, inflation is here considered as capable of destroying the institutional framework which makes the establishment of contracts in market economies feasible.
(1956) once defined it. Instead, it will be argued that hyperinflation depicts a situation in which the degeneration of the unity of the functions of money reached a stage in which virtually all contractual relationships defined in terms of money are brought to a halt. The rate of inflation which will be high enough to cause such a chaotic situation will depend on the resistance of the institutional apparatus erected as a response to inflation, therefore being subject to variation from case to case. As Beckerman (1992: 24) puts it, "whatever the rate, if expectations formation, financial contracting, the price system, production and the use of the current unit are breaking down, then the inflation has become hyperinflation". Thus, whereas a rise in prices of 200% or even 1000% per year may not be high enough to cause the abolition of the unity of the functions of money in a well-adapted economy, 20% per year may be the maximum that a non-adapted economy can support before the total breakdown of its contractual arrangements. In this sense, to establish quantitative limits between the distinct and progressive stages of the deterioration of the unity of the functions of money is regarded as a meaningless purpose.

This shift from a quantitative to a qualitative view of inflation, in which what is at stake is the preservation of the unity of the functions of money, allows the analysis, for instance, of both the fast hyperinflationary experiences after World War I and the chronic high

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5 "I shall define hyperinflations as beginning in the month the rise in prices exceeds 50 per cent and as ending in the month before the monthly rise in prices drops below that amount and stays below for at least a year" (Cagan, 1956: 25). In the same way, Dornbusch et al. (1990: 2), who correctly emphasize the institutional changes that follow the acceleration of inflation, do not escape the temptation of arbitrarily defining, in quantitative terms, the limits between qualitatively distinct inflationary environments. Auerbach and Rostowski (1990: 8-9), in turn, propose a qualitative taxonomy of inflation associated with the progressive adoption of partial monies for performing the diverse functions of money. However, as will be pointed out below, their associations do not apprehend the actual meaning of the adaptations undertaken by the modern capitalist economies.
inflationary processes suffered by several countries during the 1980s from a unified theoretical approach. This unification is possible because all those experiences illustrate the deterioration of the unity of the functions of money, the distinction between them relating to differences in the ability to promote institutional and behavioural adaptation rather than to the nature of the process. Remembered experiences of stability and the relative crudeness of their institutions made the economies under pressure in the aftermath of World War I less able to adapt to inflation than the relatively more experienced and sophisticated economies of the second half of the century. The latter were capable of creating ways of "living with inflation", therefore maintaining the unity of the functions of money and avoiding (or at least postponing) the abrupt separation between private and social wealth observed in the former economies. Thus, only through the observation of the institutional and behavioural defences a particular economy is capable of evolving as a response to inflation is it possible to determine how much inflation "a country [can] endure while still sustaining adequately its production activities" (Carvalho, 1992: 186).

The analysis of the harmful effects of inflation on the elements necessary to maintain the unity of the functions of money will consider, first, an economy unadapted to a situation of permanently rising prices.

§ "The postwar inflations took place against the background of a century of currency stability and were closely associated with financing the war expenditures or with the economic disruptions caused by the war. ... Contemporaries had no past experience with inflation. As their expectations were oriented by their prewar experience and only slowly adapted to new developments, there was widespread money illusion...

"The current cases of chronic inflation, however, take place against the background of a long history of inflation in the countries concerned. Therefore, not only do expectations adjust more quickly to actual monetary developments, but the inflation-ridden countries have adopted a variety of measures, especially the indexing of wages, social security, interest income, and taxes to prevent inflation from influencing income and wealth distribution" (Holtfrerich, 1985: 123-4).
As the institutional framework of this kind of economy is forged on the assumption of price stability, it will be referred to as a low inflation regime (section 4.2). This will be contrasted with the operation of an economy capable of quickly responding to inflation in terms of institutional and behavioural changes; due to its capacity to overcome the difficulties of maintaining the unity of the functions of money even under high and rising inflation, it will be referred to as a high inflation regime (section 4.3). Finally, the analysis of the hyperinflation regime will illustrate the situation of complete rupture of that unity, in which an economy exhausts its capacity for institutional and behavioural adaptation, thereby surrendering to the disruptive powers of inflation (section 4.4).

Through the separate analysis of each of these inflationary regimes, it is possible to observe both the progressive damage accelerating inflation causes to the unity of the functions of money and how institutional and behavioural changes can make up for this damage. Furthermore, it will be emphasised that, although maintaining that unity over time, the institutional changes carried out in highly inflationary environments create unstable structures, which put the unity of the functions of money itself at risk. To finalize, a discussion on stabilization will be carried out on two grounds. Firstly, it will stress the ultimate meaning of stabilization, which is to restore the necessary conditions for the reestablishment of the unity of the functions of money. Secondly, it will discuss alternative ways of achieving stabilization and the difficulties associated with them (section 4.5).

4.2 Low Inflation

As discussed in the preceding chapter, the unity of the functions of
money depends on the continuous and unchallenged confidence in the stability of the process of convertibility, into each other, of the instruments which perform the functions of money. Inflation threatens the unity of the functions of money because it makes the terms of convertibility between those instruments more uncertain, thereby endangering the stability of the conventions which calm the fears of establishing contracts in decentralized time-oriented economies. In fact, it will be argued that inflation disrupts that confidence through two distinct mechanisms, which, although simultaneously affecting contractual relations, will be analysed individually so that the process of deterioration of the unity of the functions of money can be unveiled in its double dimension. Moreover, it will be argued that, if inflation is confined to low levels, those effects can be neutralised by institutional and behavioural features which are intrinsic even to economies unaccustomed to inflation. That is, despite its potential capacity to undermine the institutional role of money, only if inflation persists in accelerating will it break the unity of the functions of money.

The first disruptive effect of inflation relates to the increase in uncertainty it provokes for the process of convertibility between the assets used as store of value and those legally enforced as means of payment. The earliest casualty of that effect is the use of legal tender money (state money plus bank deposits) as a store of value, for any positive rise in the price level (actual or expected) damages confidence in the stability of its functional conversion into the means of payment. This is so because the purchasing power of the legal tender money (and therefore its usefulness as a potential means of payment) is related to the
prices of the goods and services which are objects of exchange. And if these prices are rising or are expected to rise (i.e. if the monetary standard in which contractual values are expressed is suffering depreciation), the assets which answer legally to the settlement of contracts will reduce their ability to function as a store of value. In sum, as the expected value of the legal tender money is inversely proportional to the expected variation in the general level of prices, it is immediately dismissed as a store of value in an inflationary environment, as are all assets denominated in fixed sums of the national currency.

If the legal tender were the only available asset to be used as an abode for storing purchasing power, the fear of not being able to satisfy the needs for liquidity in the future would cause the interruption of contractual relations. Put another way, as the maintenance of the link between the present and the future which money provides would depend exclusively on the degree of liquidity of the direct representatives of money - which is defined and expressed through the expectations of the agents concerning the future exchange value of money - the loss of liquidity of those assets caused by inflation would provoke the rupture of the unity of the functions of money. Real-world modern economies, however, provide producers with many highly liquid interest-yielding assets

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7 As Carabelli (1992: 20-1) affirms, "[m]oney cannot be isolated from things and these cannot be isolated from money... There is organic interdependence between money and commodities, or, more precisely, between the value of money and the relative prices of commodities".

8 It must be noted that this loss of liquidity is not uniform for all producers, for it depends on the price variation of the particular commodity or contract which was intended to be bought or discharged through the delivery of a certain amount of means of payment. As Chick (1983: 305) puts it, "[i]nsofar as the variability of prices of different goods in terms of money is not uniform, uncertainty about money's exchange value, and hence an aspect of its liquidity, differs according to the goods ultimately desired".

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other than the direct representatives of the standard of value - which may equally serve as store of value. In fact, the high degree of liquidity attached to these assets restricts the demand for legal tender money only to more immediate day-to-day purposes.\(^9\) Thus, modern economies display a large number of assets which are capable of serving as store of value in an inflationary environment, provided that their values are expected to vary at least according to the variation of prices. The actual options available to the agents, however, are dependent on the degree of sophistication of the financial institutions of each specific economy.\(^10\)

Therefore, it is the availability of highly liquid assets (i.e. assets which are expected to be immediately convertible into the accepted means of payment without large losses) which may also serve as store of value (insofar as their yield is expected to make up for the loss of value caused by inflation) that provides the conditions for maintaining the unity of the functions of money under inflation. In this sense, modern economies (even if unadapted to inflation) have constitutive features which give the producers the conditions to counteract the first disruptive effect of inflation.

\(^9\) As Dornbusch et al. (1990: 23) affirm, "[a]s inflation increases, the public substitutes away from money toward other assets and toward goods. Adaptation in financial markets creates convenient alternatives to money, especially at higher rates of inflation".

\(^10\) In fact, under inflation, producers consider all the available mechanisms of protection against the loss of value of the most liquid assets. In this context, not only financial assets, but even real ones may be regarded as acceptable stores of value. As Chick (1983: 305) points out, "[w]hen prices of most things are expected to rise, holding money as a store of value plainly is not desirable, and the property of 'low elasticity of substitution' may shift to real assets: the fact that money is held only for its exchange value does not establish a unique role for money as the 'bottomless sink of purchasing power'...".
The capacity of such arrangements to maintain the unity of the functions of money is, however, limited. In fact, it can only be preserved if the rate of inflation does not accelerate over time, for the acceleration of inflation would give rise to uncertainties as to the capacity of the chosen assets to provide a financial return high enough to compensate for the devaluation of their face value caused by higher inflation rates. This would threaten the liquidity attached to them and menace their capacity to serve as store of value. The possibility of having the gains associated with the possession of these assets dissipated by higher rates of inflation would lead the producers to look for other assets with still higher expected returns, even if associated with lower degrees of liquidity. Thus, if, for whatever reason, inflation is expected to continue its acceleration path,\footnote{The institutional characteristics of a low inflation regime do not engender any inherent tendency for the acceleration of inflation. The acceleration may be caused, for instance, by successive external shocks.} the defensive behaviour mentioned above makes the unity of the functions of money more and more fragile, for, as a way of compensating for the loss of liquidity associated with increasing levels of inflation, the agents progressively and paradoxically hold assets to which lower degrees of liquidity are attached. As a consequence, the terms of immediate convertibility of the assets kept as store of value into the legally accepted means of payment become increasingly uncertain, thereby weakening the confidence of the producers as to the availability of liquidity for facing unexpected events in the future.

In terms of the approach developed in section 2.4, one could say that permanent and rising inflation provokes a progressive abandonment of assets previously used as stores of value for others originally located in more south-eastward positions in the "indifference map", as all assets gradually advance towards the point of "maximum sustainable loss". This move towards
the point of maximum sustainable loss can be illustrated if one considers how inflation acceleration affects the evaluation of the liquidity of a single money-denominated asset. Figure 4.1 relates to a situation in which the rate of inflation is expected to be either zero or constant and equal to \( z \) in the future and Figure 4.2 to a situation in which the rate of inflation is expected to be \( z' \) in the future, where \( z' > z \). If the rate of inflation is expected to be \( z \), the degree of liquidity of the asset can be depicted by the pair of focus loss/focus gain \( x_l, x_g \), as shown in Figure 4.3. When, whatever the reason, the rate of inflation is expected to rise from \( z \) to \( z' \), the confidence of the producers in their expectations concerning the behaviour of the market in which the asset is expected to be sold in the future is reduced. This affects the evaluation of the liquidity of the asset in two ways. On the one hand, each negative outcome is now associated with a lower degree of potential surprise, for an expected higher rate of inflation \( (z') \) makes the occurrence of undesired terms of convertibility of the asset into the means of payment less surprising if it happened than when the expected rate of inflation was \( z \). On the other hand, each positive outcome is now associated with a higher degree of potential surprise, for the occurrence of desired terms of convertibility of the asset into the means of payment is more surprising if it happened than it used to be when the expected rate of inflation was \( z \). As a consequence, the liquidity of the asset is now depicted by the pair of focus loss/focus gain \( x_l', x_g' \), where \( x_l' > x_l \) and \( x_g' < x_g \) (Figure 4.3). Thus, the position of the asset in the indifference map moved south-eastwards towards the point of maximum sustainable loss. Moreover, if inflation is expected to continue to accelerate, the pair of points which depicts the liquidity of that asset will inevitably reach that point.

The first assets to reach the point of maximum sustainable loss and
to be rejected as store of value are the state money and other monetary instruments accepted as legal tender which do not yield interest. However, if further rises of the rate of inflation are expected, even interest-yielding liquid assets will be abandoned as reliable repositories of purchasing power. As this process continues, those interest-yielding assets which were previously classified among the least liquid assets (but which provide higher financial returns) gradually assume the store-of-value function of money. At this stage, the unity of the functions of money is already seriously threatened, for the degree of uncertainty regarding the terms of convertibility of those assets into the means of payment is much higher than that associated with the more liquid assets used as store of value in an environment of price stability. Yet it is when none of the available assets is deemed liquid enough to give the agents the desired tranquillity (i.e. when all of the assets have finally reached the point of maximum sustainable loss) that the institutional framework of the low inflation regime attains its point of exhaustion. Put another way, in a situation in which no asset is capable of being, at the same time, both a reservoir of purchasing power over time and liquid enough to satisfy the immediate demands of the agents for liquidity, the unity of the functions of money cannot be maintained any more.

Inflation not only disrupts the terms of convertibility between the assets which perform the store-of-value function and the legally enforced means of payment, but also the relation of representativeness between the latter and the standard of value. In stable economies, contracts are established in terms of a standard of value and discharged when means of payment are transferred from the buyer to the seller in the exact amount expressed in the contract in terms of that standard (plus any contractually-stipulated interest). Confidence in the fact that that amount
of means of payment delivered actually represents the purchasing power expressed in the contracts is therefore a necessary condition for the establishment of time-oriented monetary contracts. In an inflationary environment, however, the amount of means of payment delivered today to discharge a contract established in the past (such amount representing the value expressed in the contract) no longer signifies the purchasing power it signified at the moment the contract was established. As a consequence, the transfer of wealth promised in the contract is not fully accomplished (i.e. there is an involuntary transfer of wealth from the creditor to the debtor).

It may well be the case that inflation is low enough for that failure not to be widely perceived or, even if perceived, for allowing easy rectification in the future through recontracting. In either case, this disruptive effect of inflation would not damage the relation of representativeness between concrete and abstract money. The more inflation accelerates, however, the greater the expected failure to effect the promised transfer of wealth. The widespread acknowledgment of this fact leads to a refusal to accept, as a form of settling contracts, the amount of legally enforced means of payment previously agreed in those contracts. This, in turn, provokes frustration and resentment between agents. Accordingly, the disruption of confidence in the relation of representativeness between means of payment and standard of value destroys confidence in the use of state money for expressing values through time, so that it is also progressively abandoned as a standard of value. In this

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12 As Beckerman (1992: 25-6) affirms, "[i]nflation devastates the concept of economic value, demoralizes people, generates resentment and cynicism, and sets continuing incentives for unethical business behaviour. Inflation catalyses purchasing-power shifts that have no political nor business sanction. ... Once the value of money becomes relative and ever-changing, it becomes easier to 'relativize' the other values that make civilized society possible".
sense, one can say that rising inflation engenders, sooner or later, resistance against the establishment of contracts in terms of a standard of value whose direct representatives, which are the assets legally entitled to discharge contracts, are being permanently devalued over time.

It must be noted, however, that these changes in the value of money provoked by inflation acceleration do not affect "all persons" equally, for, as Keynes (1971b: 1) asserts,

A man's receipts and his outgoings are not all modified in one uniform proportion. Thus a change in prices and rewards, as measured in money, generally affects different classes unequally, transfers wealth from one to another, bestows affluence here and embarrassment there, and redistributes Fortune's favours so as to frustrate design and disappoint expectation.

This distributive effect of inflation acceleration is compounded by the fact that the power to resist against both the establishment and the discharge of contracts in terms of a devalued currency is not the same for distinct agents. Typically, the State, banks and producers are better prepared to protect themselves against the disruptive effects of inflation acceleration than workers. In contrast to workers, those agents may compensate the devaluation of their money-denominated contracts through increase in mark-ups or, in the case of the State, through seigniorage gains. Moreover, they have access to interest-yielding assets to serve as store of value which are not available to low-income workers. Although the undermining effects of inflation to the unity of the functions of money may be at least partially counteracted by the unequal distribution of the costs of inflation among distinct social groups, those income-concentration mechanisms may, paradoxically, also increase the fragility of that unity.
over time. This may happen if, as inflation accelerates, the losses imposed on those who cannot count with protective devices against the disruptive effects of inflation are big enough to prompt them to refuse to continue accepting this institutional framework (e.g. through prolonged strikes).

In this context, one can say that inflation is low only if it is low enough not to disrupt the unity of the functions of money in an economy unadapted to inflation. Conversely, given both the institutional and behavioural features of a low inflation regime, one can say that inflation is high if it is high enough to disrupt confidence in the stability of the relations of representativeness and convertibility between the assets which perform the functions of money. Accordingly, if inflation keeps accelerating in a low inflation regime, a point will be reached in which only two outcomes could arise. The first scenario is one in which, whatever the reason, neither institutional nor behavioural changes emerge to counteract the deterioration of the unity of the functions of money. In this case, the impossibility of entering into monetary contracts would lead simultaneously to the disorganization of the productive process and to a desperate search by the producers for an alternative way of maintaining and reproducing their wealth. The lack of alternatives would lead them to the only open escape valve: a continuous rise in prices. This, in turn, would also destroy the third major function of money, which is to act as the socially accepted and legally enforced means of payment. In other words,

13 These disruptive effects of inflation can be delayed by the element of inertia associated with the use of certain assets to perform the functions of money. In this sense, the adherence to conventional behaviours may prolong the unity of the functions of money despite the acceleration of inflation. Conversely, however, the easy availability of alternative assets which may perform some of the functions of money without being devalued by inflation (e.g. interest-yielding and indexed assets) weakens that element of inertia as inflation accelerates. In fact, the retarding of the deterioration of the institutional character of money by that inertial component is more likely to refer only to the last stage of the decline of the national currency, i.e. to the abandonment of the set of
the maintenance of the institutional framework of the low inflation regime in an environment in which inflation is accelerating would lead the economy to hyperinflation. The second scenario, however, is one in which the institutional framework of the economy is transformed, thereby creating conditions for the maintenance of the unity of the functions of money over time. In brief, it means the passage to the high inflation regime.

4.3 High Inflation

The high inflation regime is not a mere transition between the low inflation regime and the hyperinflation regime. It is, first of all, the outcome of the institutional response that advanced capitalist economies give to the obstacles for the establishment of monetary contracts in the environment above described. As Carvalho (1992: 191-2) points out,

If inflation accelerates beyond what can be absorbed by an institutional system built on the assumption of stability, the need for change will become overwhelming. ... Systemic inflation, then, may lead to a change in the monetary regime itself, changing rules and practices, particularly of contracts. When this happens, the economy may move into the high inflation Regime.¹⁴

These institutional and behavioural changes are intended to control the two main sources of disruption of the previous regime, so that the unity of the functions of money can be reassured. In other words, they are supposed to create an environment in which, despite high levels of inflation (and despite the acceleration of these levels at unknown rates), confidence in instruments the State declares as legal tender - the socially accepted means of payment.

¹⁴ Salama and Valier (1992: 17-8, translated by this author) propose a similar concept ("ongoing hyperinflation") to describe this process of institutional and behavioural adjustment.
the stability of the relations of convertibility and representativeness among the various assets which perform the functions of money can be maintained.

To be successful, then, the institutional adaptation must provide producers both with liquid assets to serve as store of value and with a standard of value which does not lose its value with the rise of prices in terms of the national currency. These changes are usually carried out by the government, which introduces index-linked assets and defines the rules for the indexation of contracts.\(^{15}\) Moreover, the repeated interplay between the widespread use of this new institutional framework and its enforcement by the government leads producers to develop confidence in its stability over time. That is, the general acceptance of the institutional changes introduced and guaranteed by the government generates confidence in the fact that, together, those monetary and financial instruments are capable of performing the more basic and important functions of money, regardless of the high rates of inflation. As a result, then, both high inflation and those institutional and behavioural changes become lasting phenomena and are deeply inserted in the mentalities and practices of producers, thereby engendering a culture of inflation, so that the disruptive effects of high inflation are neutralized and money is preserved as a social institution.

As the main feature of the high inflation regime is the existence of widespread indexation of assets and contracts, a more detailed analysis of this mechanism used to preserve the unity of the functions of money is in

\(^{15}\) See Carvalho (1986) for a theoretical analysis of the reasons why the private sector is reluctant to index its contracts. Chapter 5 below discusses this question in the context of the Brazilian experience.
Basically, indexation means that the values expressed in terms of the standard of value are periodically adjusted according to the variation of an index (or a set of indices) of prices, so that any indexed value remains constant in terms of the value of the assets which compose the adopted index (Beckerman, 1992: 126). Accordingly, the assets used as store of value would have their purchasing power periodically adjusted to inflation, so that they could be regarded as potential means of payment. Similarly, contracts established in terms of the national currency would be regularly adjusted to meet the rise in prices, so that the amount of means of payment delivered to discharge an indexed contract would represent the same amount of wealth (i.e. purchasing power) the contract promised to transfer when it was established. Yet if the unity of the functions of money is to be maintained for the producers through indexation, the index which corrects both the value of the production costs and the purchasing power of the assets kept as store of value in terms of the legal tender money (the legally enforced means of payment) has to be expected to express the rise in prices quickly and well enough to give them confidence as to the real content of the contracts over time. Hence the importance of the stability of and confidence in the institutional setting that regulates the relations of convertibility and representativeness between the instruments

16 If a particular economy is not capable of adapting its monetary and financial system through the introduction of a comprehensive indexation of contracts, the only alternative available for the agents is to keep a foreign currency as store of value and to correct contract values periodically according to the variation of the exchange rate of this currency for the national money. As Dornbusch et al. (1990: 22) affirm, "[e]xperience has shown ... that in countries with chronically high inflation financial markets adapt to provide stable assets, and when they do not, the dollar becomes an option". Although broadly performing the same role as indexation (i.e. to maintain the unity of the functions of money), the use of foreign currencies is a much more unstable alternative, for the exchange rate between the foreign currency and the national currency (whose concrete representatives are the legally enforced means of payment) is subject to pressures and destabilizing powers which are out of the control of the government.
which perform the functions of money. In this sense, one can say that 
indexation restores the unity of the functions of money even in an 
environment of high and accelerating rates of inflation, provided that the 
producers have confidence in the indexation system.

The institutional framework of the high inflation regime, however, 
is limited in its capacity to preserve that unity. These limits relate to 
the capacity of the chosen indices to express faithfully the rise in prices 
and are reached if inflation continues to accelerate. That is, although the 
high inflation regime provides producers with a complex institutional 
framework to "live with inflation", it is not inflation-proof; on the 
contrary, the high inflation regime is vulnerable to continuously 
accelerating inflation. It is vulnerable, first, in the sense that the 
effects of any external inflationary shock (e.g. the rise of the price of 
an important imported good or a devaluation of the exchange rate) is 
quickly spread from the original and localized point where it happened to 
the rest of the economy, thus amplifying its consequences for the general 
level of prices. Accordingly, the more comprehensive the structure of 
indexed contracts the higher its vulnerability to external inflationary 
shocks and the stronger the impact they would cause in terms of the rise 
in the general level of prices. However, it is in the more crucial sense 
that accelerating inflation (wherever its origin) threatens the capacity 
of the indexation system to maintain the unity of the functions of money 
that its vulnerability must be explained. Such vulnerability alludes to the 
fact that the higher the inflation levels, the more difficult it is for the 
monetary indexed values to follow the rise of prices in terms of the 
national currency quickly enough to allow producers to feel secure about 
the real value of both the contractual relations and the indexed assets 
which serve as store of value. Whenever that confidence vanishes, the high
inflation regime collapses and the hyperinflation regime begins to operate. In this sense, the passage from high inflation to hyperinflation happens when, regardless of the institutional and behavioural capacity of adaptation of the high inflation regime, inflation levels are high enough to break the unity of the functions of money.\textsuperscript{17}

The reasons for this vulnerability in the high inflation regime can be found in some constitutive features of any indexation system. The first reason is associated with the inherently limited scope of the specific indexes of prices adopted by producers to revise the values of their assets and contracts. As any index reflects the rise in prices of a particular basket of commodities, the simple and ordinary fact that a producer may possess assets and liabilities indexed to different baskets is a potential source of instability, for the content of distinct contracts may vary differently in terms of the legally enforced means of payment according to the index used to correct their values over time. Thus, if the index which corrects the value of the assets a producer uses as store of value is expected to rise less than the index which adjusts the value of his

\textsuperscript{17}Although not possessing, in the 1920s, the sophisticated mechanisms of indexation of the high inflation regimes, the German economy early developed its substitutes for the Mark as store of value and unit of account during the inflationary times. Such arrangements allowed the German economy to use the Mark as means of payment even under high levels of inflation. It was not before these arrangements collapsed that hyperinflation and so the complete disorganization of the economy took place. As an economist who lived in Germany in the early 1920s affirms, "I would think, although I have never seen any calculations, that statistically the preponderance of all transactions was still effected in marks. I never received wages in anything but marks - with one exception, that once in the summer of 1923 each of us received in supplement to our mark wages, a one-dollar certificate of the $500 million issue... Nor did I ever pay for anything, be it a railroad ticket or whatever else, except in marks. I am sure this was not exceptional. I therefore think the mark remained the prime means of payment, particularly for wages and in retail trade, until the very bitter end. Of course, in the other functions of money, the mark was gradually supplanted - as a unit of account, and even more so as a store of value" (Goldsmith, 1985: 165). See also Keynes (1971b: 50).
production costs, this producer will certainly distrust the capacity of the indexation system to maintain the purchasing power of those assets over time, thereby threatening the unity of the functions of money.\textsuperscript{18}

The extreme case of this situation of inequality is that in which even when most of the contracts in an economy are index-linked, some of them are still valued in terms of the national money, i.e. they are non-indexed contracts. This situation expresses the distinct capacity of adopting different indices to correct contractual values that the diverse agents possess. This capacity is directly related to access to information and to the power to impose a specific index for the establishment of contracts and has unequivocal distributive effects.

The second constitutive feature of the systems of indexation which reflects these systems' vulnerability to inflation acceleration relates to the inescapable fact that indexed contractual values are only corrected after a variable "interval of time necessary to collect and process price information ... [which] means that a given loss of real income caused by rising prices will only be paid after some time has elapsed, causing losses between the two dates" (Carvalho, 1992: 195). Moreover, contracts are indexed at discrete, not continuous points; so, if inflation is expected to be positive between the beginning and the end of any interval adopted for indexation, the value of contracts discharged within the interval will be eroded. Thus, the higher the expected inflation within the chosen interval, the bigger the expected loss of purchasing power.\textsuperscript{19} As a

\textsuperscript{18} For a detailed discussion of the virtual impossibility of creating an "ideal" index of prices, see Keynes (1971a: part II).

\textsuperscript{19} As Arida and Lara Rezende (1985: 32) assert, "[u]nless the length of the period is minimal, 100 percent indexation clauses are an imperfect hedge against inflation. For a given indexation period, the higher the inflation rate, the smaller the real value of the contract. For a given inflation rate, the shorter the period between readjustments, the higher the real value of the contract".
consequence, if different intervals are used to readjust different contracts, producers who have the value of the assets used as store of value corrected after intervals longer than those used to correct the value of their contractually-indexed liabilities will incur losses. Moreover, as the moment in which prices are readjusted is not synchronized for all agents, even if the interval were the same for all contracts, some would still have their outflows corrected by the rate of inflation before having the value of their assets adjusted to inflation, which would also cause them losses. Such a system of indexation is therefore insufficient to maintain general confidence in the permanence of the real value of contracts in an environment of accelerating inflation.

Similarly to what happens with the adoption of a particular index to correct contractual values, the adoption of a certain indexation interval after which those values will be readjusted is not subjected to individual will. They reflect relations of power in society. Typically, the more powerful an agent, the smaller the interval after which the value of his assets will be readjusted; and vice versa. Obviously, the bigger the divergence in terms of indexation intervals among distinct agents, the bigger the distributive effects of indexation. Besides being socially unjust, the distributive effects of systems of indexation may constitute, in itself, an additional threat to the maintenance of the unity of the functions of money within the institutional framework of the high inflation regime. This may happen if the refusal of the system of indexation by the

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20 Historically, this is what has happened with the collection of taxes in high inflation economies, thereby affecting the governmental deficit. As Dornbusch et al. (1990: 11) put it, "[I]lags in collection in a less than fully indexed tax system lead to the erosion of real revenues, not only automatically, but also from the additional erosion that results from manipulated delays in payment". This major damaging effect on public finances is compounded by other mechanisms also associated with the elevation of inflation rates. For a comprehensive list of these mechanisms, see Dornbusch et al. (ibid.: 11-2).
losers of the high inflation regime is strong enough to disrupt its stable operation but too weak to force those who gain with its maintenance to accept its substitution for a more equitable one. As a consequence of this conflict between gainers and losers, the institutions of the high inflation regime are discredited and progressively viewed as incapable of maintaining money as an element of social cohesion.

Thus, if left unchanged under the pressures of accelerating inflation, the high inflation regime would soon exhaust its capacity to maintain the unity of the functions of money. This vulnerability may, nevertheless, be temporarily and partially overcome through further institutional adaptations introduced by those producers who feel their situation worsened by the acceleration of inflation and have the political power to promote such adaptations. For those who do not have the power to make such adjustments, however, the inequalities of the system will continue imposing losses, thereby leading them progressively to contest the legitimacy of the high inflation regime. Those institutional changes consist of the adoption of other indices and/or the reduction of the interval after which price corrections are made, so that the most powerful agents regain confidence in the fact that indexation still makes up for the loss of purchasing power of the national currency, thereby neutralizing some of the sources of instability of the indexation system. Obviously, these agents will try to adopt the indices that point to higher rates of inflation, provided that they are legally allowed to do so. Similarly, they will try to reduce that interval to the minimum, so that they can protect themselves against additional losses. Consequently, if inflation keeps accelerating, those adaptations will become more and more widespread, so much so that the system will converge to a situation where the intervals of correction span only a very short period of time and the majority
of the producers (but not the low-income workers) adopt the more reliable index to correct their contracts. In the limit, that index itself is substituted for the national monetary standard as the standard of value, which makes indexation for those most powerful agents continuous over time.\(^{21}\)

From this moment onwards, and at least for these agents, state money functions only as the means of payment for the discharge of contracts. The store-of-value function is performed by index-linked assets and the standard-of-value function is performed by the index itself. Nevertheless, the position of the state money in the contractual relation is not trivial at all, for it is only through the delivery of state money or its direct representatives (i.e. non-indexed money) that a contract can be definitively discharged. This is so because the courts of law of a country are normally empowered to enforce the discharge of a contract only in terms of the national currency.\(^{22}\) In fact, the means-of-payment function is at the core of this institutional arrangement. Although it is kept in minimum quantities and for the shortest period of time possible, it is essential that the values of the indexed contracts can be expressed in terms of the national currency at any time and in a stable parity. From the point of view of the debtor, it is so because whenever a contract needs to be discharged...

\(^{21}\) As Frenkel (1990: 118, translated by this author) states, "[w]hen the magnitude of inflation surpasses certain limits, even the shorter mechanisms of indexation ... are insufficient to preserve the survival of the nominal contracts. These tend to disappear and, in this context, money loses its functions of standard of contracts and standard unit".

\(^{22}\) Although courts can, in principle, enforce contracts established in any currency or commodity, in modern capitalist economies they usually refrain from using this prerogative to uphold what both the legislative and the executive decide as having the power to discharge contracts. As an example of this supportive relationship between judiciary and government, one can mention the episode in which the Supreme Court of the USA endorsed the decision taken by the American government in 1933 to prohibit "gold clauses" in contracts (obligations payable in gold or in Dollars measured by gold) (Buchanan and Tideman, 1975: 22-41).
discharged, the value of the contract established in terms of an index of prices should be expressed in terms of the national currency, so that the assets kept as store of value (also indexed) may be converted into the legal means of payment in that same amount. From the point of view of the creditor, in turn, confidence in the correspondence between indexed contracts and a certain amount of legal means of payment (non-indexed money) at any time lulls his fears of losing, at the moment of discharging the contract, part of the transfer of purchasing power which was promised when the contract was established. It is the stability of these relations of convertibility and representativeness that maintains the unity of the functions of money and distinguishes the high inflation regimes which use an index as standard of value from the "imaginary" money systems of pre-modern economies.

Thus, the high inflation regime possesses such an elastic capacity for adaptation that, even under accelerating inflation, the unity of the functions of money can be maintained. It is important to note, however, that this adaptation process is, in a vital sense, contradictory. Firstly because the maintenance of the unity of the functions of money occurs at the expense of worsening the income distribution profile of the economy and, therefore, of strengthening one of its constitutive destabilising features. Secondly because at the same time that those institutional changes provide the producers with protection against the disruptive effects of inflation acceleration, they may perpetuate and even engender the acceleration of inflation. This consequence can be easily explained if those adaptations are viewed from a different perspective. As the new indices adopted by those who have the power to change the clauses of indexation of their contracts are always indices which have recorded rates of inflation consistently higher than those expressed by the index
previously adopted (otherwise there would be no incentive to adopt a new index), indexed values will tend to rise at consistently higher rates than in the preceding periods. This, in turn, will provoke an increase in the general level of prices, thereby compounding the acceleration of inflation. Similarly, the shorter the indexation intervals the faster inflationary shocks are incorporated into the prices of specific contracts and spread throughout the economy. Thus, the same problems that were intended to be resolved through the reduction of the interval would, paradoxically, be reinforced. Accordingly, successive attempts to maintain the unity of the functions of money through either the change of indices or reductions in the indexation interval will probably be followed by increasing rates of inflation and, consequently, by further threats to that unity. Put another way, although the improvement of the adaptive capacity of the high inflation regime is capable of protecting contractual relations against the disruptive effects of even very high and accelerating inflation, it may also provoke the further acceleration of inflation, thereby leading the economy to a situation of greater vulnerability. Cumulatively, this process may lead the economic system to such a precarious situation for the preservation of the unity of the functions of money that it may cause the exhaustion of the capacity of that regime to adapt to still higher rates of inflation.

Moreover, even if one disregards the accelerationist effects provoked by the adaptive mechanisms mentioned above, the high inflation regime is, under certain conditions, structurally likely to cause the endogenous acceleration of inflation. In order to understand how this may happen, it is necessary to consider the process of formation of supply prices in capitalist economies. The key element of this process is the fact that producers must decide the prices of the goods they produce in such a way
that they are high enough both to cover their costs (which include the production costs) and to provide them with part of the funds necessary to continue the process of wealth accumulation. However, as the productive process is based mainly on forward contractual relations (so that the bulk of the costs are paid off in the future), what the supply prices of the goods produced must reflect is the expected value of those costs. Moreover, prices must also be low enough to keep the firm's share of the market, given the current conditions of competitiveness in specific markets. Thus, prices must include a component associated with expected costs and another component expressing the desired mark-up of the producers, given market restrictions.

Under conditions of price stability, where no rule of indexation is operating, producers usually take past and current costs as the basis to form expectations about future costs and, consequently, to establish their prices. And as producers typically do not raise their supply prices if their costs are expected to remain unchanged in the future, one may say that the stickiness of production costs strengthens the stability of prices.23 In a high inflation regime, however, where indexation of contracts is widespread, a significant part of the costs is indexed, notably wages. In this context, the future value of the contractually-established costs will be certainly different from and higher than the current ones. Accordingly, the value of past and current costs is no longer a good indicator for forming expectations about future values and, in the

Davidson and Kregel (1980: 143-4) point out this role of monetary contracts, emphasizing the importance of wage contracts: "Since the money wage contract is the most ubiquitous forward contract in modern economies and since the duration of money wage contracts normally exceeds the gestation period for the production of most goods, it is the institution of forward labour contracting which provides a basis for the conventional belief in the stickiness or stability in prices over time. Such a convention is necessary if entrepreneurs are going to take long-term positions in productive facilities".
absence of other conventional procedures, the process of formation of flow
supply prices inevitably assumes a more speculative character. In a high
inflation regime producers set supply prices exclusively according to their
expectations concerning the value of the contracts they will have to
discharge in the future. Actually, as these contracts are linked to price
indices, the producers will set their prices according to their
expectations of future inflation. This specificity of the determination of
prices in high inflation regimes is summarized by Carvalho (1992: 196-7)
as follows:

Instead of taking historical costs as the basis for price
determination, firms know that future costs will be
necessarily higher than current or past costs. For this
reason, current mark ups on current observed costs have to be
higher to cover the necessary increase in prime costs in the
next period. ...[F]irms have always to face the uncertainties
of a dual system where production costs are at least partially
indexed (labour costs, financial costs, taxes and so on), but
their receipts are not. They have to engage in production
processes without always knowing how high some of their costs
are really going to be.

Despite the potentially unstable nature of this "dual system", it is
important to note that the institutional framework of high inflation
regimes neither automatically nor necessarily promotes the acceleration of
inflation, for the resulting outcome depends ultimately on the expectations
of producers. If there exists a convention shared by the majority of them
that prices in the future will rise at the same rate they rose in the past,
there is no reason for accelerating price rises. In this scenario,
producers simply use past inflation as the best indicator of future
inflation: inflation assumes an inertial character and the same rate of

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24 In fact, in such circumstances, the fear of losing their share of
the market prevents agents from overpricing.
inflation is propagated over time.$^{25}$

It is the alternative scenario, however, in which producers— for whatever reason — do expect future inflation to be higher than the current one, that makes indexation provoke the endogenous acceleration of inflation. It is not necessary for an external shock to detonate this process; the generalized uncertainty concerning future levels of inflation is enough to do so. It is the fear of not being able to discharge their indexed contractual commitments in the future that leads producers to increase their supply prices defensively (ibid.: 198). Thus, the price-setting process in a high inflation regime incorporates a component of potential acceleration of inflation as a defensive behaviour, so that any expected rise in prices in the future may develop into a violent process of acceleration in inflation now, thereby confirming those expectations. The more this behaviour is adopted by producers, the more inflation will accelerate. When associated with the other mechanisms of inflation acceleration, this process of endogenous acceleration leads to progressively higher levels of inflation.

For all these reasons, one can say that the high inflation regime is both vulnerable to inflation-acceleration and potentially self-defeating. It is vulnerable not only because it propagates the effects of external shocks but also because it engenders defensive responses which further accelerate inflation. It is potentially self-defeating because the high inflation regime may, under certain circumstances, engender an endogenous acceleration of inflation. Accordingly, although the institutions of the high inflation regime provide the producers with the necessary conditions for establishing contractual relations under high inflation they also make

$^{25}$ For a presentation and discussion of the characteristics and dynamics of inertial inflation, see Bresser Pereira and Nakano (1987).
confidence in the institutions which safeguard the relations of representativeness and convertibility between monetary instruments progressively more fragile, thereby pushing the regulatory capacity of those institutions to its limit. Eventually, the continuous worsening of that situation may cause the total rupture of the unity of the functions of money and, therefore, the absolute separation between private and social wealth. When and if such a stage is reached, one can say that the level of inflation is high enough to be considered hyperinflation.

Given all these problems associated with indexation, it could be argued that the best way to "stop the harmful effects of inflation is to end it rather than get used to living with it" (Vasena and Szewach, 1985: 8). Such argument, however, misses at least two important points. First, even if the primary and fundamental sources of inflation are correctly identified, it may be the case that it is not politically (or even economically) possible to tackle them in a definitive way. That is, the costs of "ending" inflation may be, in any realistic sense, unbearable for a given social structure. Second, indexation may minimize the undermining effects of inflation on the institutional role of money without necessarily provoking the acceleration of inflation. That is, despite the instability that the institutional features of the high inflation regime (mainly indexation) may engender, it is not certain that these negative effects will emerge in any relevant magnitude. It is only in certain specific situations (namely, when producers expect future inflation rates to be higher than the current ones) that indexation engenders endogenous acceleration, thereby destabilizing convertibility. As a matter of fact, in many cases indexation is capable of providing the minimum of stability
necessary to the establishment of contracts over long periods of time; and even when this does not happen, it does not necessarily provoke acceleration. As Williamson (1985: 170) argues,

it is mistaken to condemn indexation at all times and in every form... In short, indexation must be judged by its effects in any specific context, rather than condemned or embraced in the abstract. This conclusion is perfectly consistent with recognition that, when indexation serves to reinforce or perpetuate an inflation, it needs to be modified.

Thus, it is important to note that there is no determinism in the process of transition from a high inflation to a hyperinflation regime. One will not necessarily lead to the other, for the capacity of institutional adaptation and innovation is not predetermined. That process may not only be slowed down by successive institutional changes but even brought to a point of relative stability; i.e. even if potentially the instability is still present and can always resume its path of destruction of the unity of the functions of money, at least temporarily money can perform its role of social operator. As a matter of fact, the capacity for institutional response will vary from case to case, according to the degree of both institutional flexibility and tolerance of the specific agents involved in the process of generation of productive wealth. What is important to

26 As Dornbusch (1985: 54) affirms, "Brazil's good performance in terms of growth and inflation compared to other Latin American countries and the dramatic adjustment of 1983-84 must be credited to indexation".

27 Therefore, to affirm that, due to the existence of mechanisms that may, under certain conditions, endogenously accelerate inflation in a perfectly indexed economy, "time consuming production processes will grind to a halt for no one will undertake the required long-term production commitment" (Davidson and Kregel, 1980: 147) is too strong a statement. This affirmation implies a deterministic relation between indexation and the explosion of prices which is neither necessarily nor always true. For further examples of the need for a non-deterministic approach to indexation, see Peeters (1985: 95), Kouri (1985: 106-7) and Sigurdsson (1985: 115).
retain is the potential duality of the institutions which sustain the high inflation regime: on the one hand, they create the conditions for social cohesion to exist even under high inflation; on the other hand, they may cause the acceleration of inflation to levels which may eventually destroy the capacity of the high inflation regime to accommodate the irrevocable tension between private interests and social needs.

4.4 Hyperinflation

Despite the flexibility of the high inflation regime to adapt its institutions and thus to counteract the disruptive effects of inflation, the continuous acceleration of inflation (whatever its causes) may undermine such adaptive capacity, thereby weakening the unity of the functions of money. Also, the faster the prices rise the weaker that unity, leading to a state of institutional fragility in which the producers hesitate to make contracts even if indexed. Eventually, when the institutional framework which maintained the unity of the functions of money has completely broken down, the economy enters into the hyperinflation regime, in which the connections between social and private wealth are almost completely cut. In this particular sense, and whatever the actual rates of inflation, the hyperinflation regime represents the collapse of confidence in the institutions and behaviours on which the interchangeability between the diverse instruments which perform the functions of money was based.

Thus, the difference between high and hyperinflation is not simply that, in the latter situation, prices reach higher levels than in the former; in fact, as Hicks (1989: 135) points out, the main distinction between high and hyperinflation is "the fact that in hyperinflation no prices can be established, for there will be a rise in the price level
before any transition can be completed, so that money is losing its
capacity to act as a means of payment". In other words, prices rise so fast
that, even with the adoption of sophisticated institutions, it is
impossible to represent indexed prices in terms of a certain amount of the
legal means of payment at any specific point in time. In these
circumstances, no conversion can be undertaken and, as it is impossible to
know contractual values in terms of the legally enforced means of payment,
contracts cannot be discharged either. It is this situation which prevents
producers from establishing contracts and defines the hyperinflation
regime. Therefore, the high inflation regime only breaks down when its
institutions are no longer capable of accommodating the pressures provoked
by permanently rising prices, so that the national currency loses its last
remaining function: to be the legally enforced means of payment. At that
moment, the process of degeneration of the unity of the functions of money
provoked by the permanent and gradual rise in prices achieves its apex, for
private wealth cannot be reproduced through the world of production any
more. In this sense, hyperinflation disrupts one of the basic elements
of social cohesion in modern capitalist economies and prompts, accordingly,

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28 Auerbach and Rostowski (1990: 9) define hyperinflation, instead, as
being the situation in which the national currency loses its role as a unit
of account. However, as discussed above, even in this situation the unity
of the functions of money can be maintained with no unavoidable tendency
either for the explosion of prices or for the complete disorganization of
the productive process, provided that both the monetary and financial
institutions and the behaviour of the agents adapt to compensate for this
loss (e.g. via the introduction of an index of prices as the standard of
value).

29 As Carvalho (1986: 178) asserts, "[o]ne important distinction
between the two situations is that in an inflationary economy with formal
indexation long term contracts can survive, while hyperinflation reaches
some form of 'real equilibrium' through the destruction of the system of
contracts... Certainly, this is one of the main reasons, if not the main
one, why economies with very high inflation can still maintain production
going and even growing, while economies suffering hyperinflation quickly
collapse".
the disfranchisement of those who do not command productive resources. These ultimate consequences of hyperinflation are described by Nakano and Tokeshi (1990: 30, translated by this author) as follows:

Hyperinflation, in its essence, may be characterized as a self-destructive process of absolute rejection of the national money and of some basic institutions over which the society is founded. It is a process in which the conventional rules of economic transactions are destroyed, contracts are disrespected, the market is dismissed as the mechanism of coordination of economic activity, goods have no price in terms of the national money, the conventional administrative structures and mechanisms of decision become useless, the productive process is paralysed and the chains of commercialization are broken off.

In this sense, the passage from the high inflation to the hyperinflation regime can be viewed as a process of fragmentation of the institution which create some of the necessary conditions for social cohesion to be achieved in market economies. It means a return to the system of "imaginary" money prevailing in pre-modern economies, in which the functions of money were not only performed by different "things" but there was no socially accepted convention as to the process of convertibility among them either (Einaudi, 1953: 257). When summed up under these conditions, these "things" do not form an "all-purpose" or "fully developed" money but only a collection of special-purpose monies with no articulation among them. Hyperinflation, then, may lead modern economies to adopt pre-modern forms of organizing the economic system, as, for instance, the adoption of private monies with limited acceptance.30 Yet

30 As Bresciani-Turroni (1937: 341) states, in the last phase of the European hyperinflations, "the legal paper money was replaced by other monies (which had no legal recognition), not only as 'a store of value' and as 'a standard of value', but also as a means of payment. Little by little foreign money, or the old national metallic money (which had been hoarded), or new money created by private firms, entered the circulation. The legal money was rejected by the public".
whereas these forms could have been able to maintain stability in pre-modern economies they are not capable of avoiding the instability brought about by the breakdown of the unity of the functions of money in modern economies. As Aglietta and Orléan (1990: 282, translated by this author) state,

the multiplication of private monetary signs cannot compensate for the absence of a central principle of reference. Such a principle, contrarily to the empiricist belief, was never produced through the simple addition of the elementary signs. The inflationary multiplication of these signs does not mechanically engender any superior meaning; on the contrary, experience teaches that it may precipitate the complete destruction of the previous norms of coherence.

Therefore, as hyperinflation means the collapse of the unity of the functions of money, one argues that the transition between a high inflation regime and a hyperinflation regime corresponds to the progressive breakdown of the institutional devices which restrained the inherently conflictive market relations from assuming violent forms. Put another way, that gradual displacement of money from its role as a social institution is the counterpart of the transformation of the culture of inflation into the culture of violence, in which codes and rules that allowed the existence of some kind of social cohesion even under high inflation are ruined.

4.5 Stabilization

As opposed to inflation, which gradually disrupts the unity of the functions of money, stabilization is a process which both stops and reverses the undermining effects of inflation, thereby restoring the
conditions under which social cohesion can be regained. But despite that
general nature, stabilization has distinct motivations, which vary, for
each specific case, according to the degree of deterioration of the
institutional role of money. Under high inflation regimes, for instance,
stabilization policies are adopted because of the fear of the turbulence
that the collapse of their unstable structures would provoke and under the
political pressure of those who lose most with their maintenance. Under
hyperinflations, in turn, it is the chaos itself that imposes and urges the
construction of a new institutional order. Moreover, the ease or difficulty
with which stabilization policies can be successfully adopted also depends
on the stage of destruction of the unity of the functions of money.

In this sense, the stabilization of an economy under hyperinflation
is a somewhat faster and less difficult process than the stabilization of
an economy that "lives" with inflation under a high inflation regime. The
relative ease with which a stabilization programme can be adopted in an
economy completely disorganized by hyperinflation reflects the fact that
the degeneration of the cohesive codes and rules is so violent and
distressing that any kind of agreement to reestablish basic rules of
economic behaviour is welcomed. As Dornbusch et al. (1990: 49) point
out,

\[\text{Bresciani-Turroni (1937: 336-7) points out the effects of the}
\text{stabilization of German hyperinflation as follows: "Commerce revived,}
\text{the food situation in the cities was eased, the purchasing power of many}
\text{classes was increased, the factories re-opened, unemployment declined}
\text{rapidly, and a refreshing wave of confidence revived the energies of the}
\text{German people".}

\[\text{According to Bresciani-Turroni (1937: 343), it became obvious}
\text{during the German hyperinflation "that the monetary chaos could not go on}
\text{any longer without involving the entire economic system in complete}
\text{catastrophe", so that "among the German population the need for a stable-}
\text{value currency had become greater than ever. The working classes especially}
\text{declared further delays to be intolerable and imperiously demanded a means}
\text{of payment with a stable value".}

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In a hyperinflation, the disruption of normal economic life and the extravagant cost of carrying on business that are caused by extreme inflation create the political basis for a national unity government or emergency powers, which would be the basis of a forceful and lasting stabilization.

Moreover, hyperinflation is a relatively short-lived phenomenon also because it is the culmination of a process which, by provoking the complete deterioration of the unity of the functions of money, simultaneously generates the required economic conditions for the restoration of that unity. When the national currency is no longer expected to maintain a relation of stability with the instruments used as store of value and standard of value, only direct representatives of these instruments are deemed stable means of payment and are therefore desired as such. In this context, stabilization may be achieved through a monetary reform, in which a new national currency is introduced with stable terms of convertibility into those assets, so that thereafter only this new currency is legally enforced as the means of payment. This process implies the acceptance of the fact that the old national currency has lost all of the attributes of moneyness and is definitely abandoned. Insofar as the agents gain confidence in the new currency, contracts begin to be denominated directly in terms of it and its concrete representatives begin to be used as store of value, gradually assuming the other functions of money as well.\[33\] Thus, one can say that as hyperinflations generate both the political will to stabilize and the basic economic requirements necessary to do so, they bear the seeds of their own destruction (Robinson, 1938: 512).

However, the stabilization of a hyperinflation regime is not a

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33 This was what happened, for instance, during the stabilization of the German hyperinflation in the 1920s, when "the rentenmark and the new paper marks took the place of the various auxiliary monies, legal and illegal, which had been issued in the autumn of 1923 and of foreign exchange" (Bresciani-Turroni, 1937: 348).
spontaneous process. Although the necessary conditions to stabilize are generated by the hyperinflations themselves, experience shows that only a monetary reform is capable of actually restoring monetary unity (Frenkel, 1990: 130). Moreover, it is important to note that, to maintain the stability of the process of convertibility between the instruments which perform the functions of money, one cannot simply decree the rate of exchange of the "new" currency into the other instruments. If the ultimate causes of inflation are not simultaneously dealt with in the process of stabilization, inflation reappears sooner or later, thereby destabilizing the artificially fixed terms of convertibility and once again undermining confidence in the complementary character of the functions of money. Therefore, if the objective of a monetary reform, as Fishlow (1985: 156) argues, "is not merely disinflation but rather the establishment of continuous noninflation", it must be implemented at the same time as the basic causes of inflation are attacked.

Besides sharing the difficulties to implement a monetary reform above mentioned, to stabilize an economy under a high inflation regime is a still more complicated task. First of all, the degeneration of the social codes and rules which regulate economic behaviour has not achieved its maximum degree yet, so that the reproduction of the system both in its social and economic dimensions is somehow attained, although progressively assuming

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34 Williamson (1985: 172), for instance, notes that the reason for the failure of the first attempt to implement a monetary reform in Hungary in 1946 was the fact that "the fundamentals had not been dealt with...". Arida and Lara Rezende (1985: 36), in turn, affirm that "[i]f inflation is not purely inertial, monetary reform is still necessary to stabilize prices, but it would need to be preceded by action on the fundamentals".

35 Thus, whereas the deterioration of the unity of the functions of money is a general effect of inflation which can be analysed independently from its actual causes, the recovery of that unity through a stabilization plan requires the complete understanding of what makes prices rise in a specific context.
more precarious forms and gradually becoming more unjust in social terms. In other words, the capacity of the institutional innovations to maintain money as a social operator has not been stretched to its limit yet. In this environment, not all of the agents are losers, as in a hyperinflation regime. As a matter of fact, some of them — those who have access to financial innovations and who are therefore better adapted to live with inflation — believe they are better off than in a hypothetical scenario of stability. Also, as there is always the risk of the stabilization plan failing after an initial success, those agents fear losing their privileged position in society if, in a new institutional framework, inflation accelerates again. For this reason, they oppose any attempt to stabilise the economy.

Actually, in a high inflation regime even producers — which are typically among those better adapted groups — differ in their capacity to protect themselves against the losses imposed by inflation. On the one hand, contractual values are readjusted at intervals of different length and at distinct moments of time. On the other hand, they are corrected by different price indices, according to the producers' appreciation of the quality of the indices and their power to use them. The existence of such a hierarchical framework means that the operation of the high inflation regime transfers income not only from the unadapted groups (typically the illiterate, the poor and the elderly) to those better adapted to live with inflation, but also between agents of the latter group. However, the fact that less well adapted producers transfer income to better adapted ones does not prompt the former group to defend the stabilization of the economy. As these producers invariably pass their losses on to the unadapted groups, the continuous rise of prices "pacifies" the distributive conflicts among the better adapted to inflation. In this context, any
monetary reform would inevitably provoke a feeling of loss for the less well adapted producers. In spite of the reduction of inflation, they would feel that the inequalities of the system were simply frozen and maintained in the new environment of assumed stability. In response to that, those producers would pressure for a rise in price of assets whose sale provides them with the income necessary to discharge their liabilities. If they are numerous and powerful enough, any attempt to implement a monetary reform will be almost certainly obstructed.

Thus, as opposed to what happens in a hyperinflationary environment, there exists no consensus as to the need for implementing radical institutional changes, which is a requirement to convert a high inflation regime into a stable one. Much to the contrary, there are strong resistances against any attempt to change the basic features of the high inflation regime. Moreover, and besides those deliberate resistances, the institutional sophistication of high inflation regimes also fosters the appearance and consolidation of habits and conventions which mould the behaviour of the agents, thereby creating psychological resistances against the rupture of the prevailing structure. Therefore, to stabilize an economy under a high inflation regime demands the previous construction of a political compromise that commits the agents to the need for stabilization, so that the relative losses that stabilization would impose on those who gain with the preservation of the inequalities of that regime could be negotiated. In such a context, only the political pressure (whether in organised forms or not) of those who are losing most with the maintenance of the high inflation regime may counteract the resistances of those who are gaining with its inherent inequalities and force the emergence of a compromise to regulate distributive conflicts.

Given these features of the high inflation regime, hyperinflation
itself may be regarded as the shortest way to achieve stabilization. The inadequacy of this reasoning, however, is evident if the enormous economic and social costs of hyperinflation are considered. Moreover, as seen above, the self-generated political consensus as to the need to stabilize a hyperinflation will only be attained when most of the agents have their institutional defences against inflation destroyed. However, as not all of these defences are equally available to all of them, the route from a high inflation to a hyperinflation regime is extremely harmful and unjust from the point of view of the society as a whole. Those less protected agents, i.e. those who have restricted access to some institutional defences, would have to pay an unbearable and unjustified price for the achievement of the adequate conditions for implementing a stabilization programme. As Kaldor (1985: 61) argues, advocating "hyper-inflation as a cure for inflation ... is like advocating the spread of a highly contagious disease in order to acquire immunity from it".

For this reason, the only way to achieve stabilization before such an undesired state of things occurs, is to forge a political agreement which makes possible the implementation of a monetary reform, whereby a new national money is introduced and the terms of convertibility between this new currency and the assets which used to perform the functions of money are established. Besides, it is necessary to introduce compensatory measures (e.g. incomes policies)\(^36\) to make up for the inequalities inherent in a less-than-complete breakdown of the unity of the functions of money. Evidently, the same point made above concerning the need for the

\(^{36}\) The implementation of an incomes policy, however, "requires complex new institutional arrangements to replace the prevailing systems of wage bargaining" (Kaldor, 1985: 61). This is one additional reason for advocating the idea that a monetary reform can only be successfully implemented in a high inflation regime if a "far-reaching consensus and co-operation by the three 'social partners', Capital, Labour, and Government" is attained (ibid.).
resolution of the fundamental causes of inflation (which will vary from case to case) also applies for any attempt at stabilizing a high inflation regime.

As an alternative to the kind of monetary reform above outlined, some authors (e.g. Dornbusch et al., 1990) often propose full dollarization (i.e. "the adoption of dollar as a national currency") as a way of stabilizing economies on the brink of a hyperinflationary crisis. Their justification is based on the suggestion that, in such cases, "the distance to full dollarization is much shorter than the distance back to a sound national currency" (ibid.: 60). Before considering both the advantages and disadvantages of that proposal, it is important to clarify the diverse and sometimes vague connotations in which the term dollarization is employed.

The first and most relevant meaning of dollarization is that which considers it as a spontaneous process whereby, in the context of rising inflation, the Dollar gradually assumes the functions of the national currency, first as the more reliable store of value, then as the standard of value and finally as the more widely accepted means of payment. In this sense, dollarization is a process which represents the progressive incapability of the national currency to perform the functions of money.

37 The reference to the American Dollar as an alternative currency to perform the functions of a national currency is associated with the economic supremacy that the USA has experienced since World War II. However, as this situation is being progressively questioned both by the economic imbalances of the United States and by the growing importance of the German and Japanese economies in the world economy, it is possible that in a near future this discussion will be made in terms of the Mark or Yen. Thus, although convention is followed here and it is assumed that the Dollar is the natural choice for a stable currency, it must be clear that it is only a proxy for conveying the concept of a stable currency.

38 The velocity with which this process occurs and its actual institutional forms depend on the specificities of the monetary and financial systems of each country. Thus, if there are other alternatives (e.g. highly liquid indexed bonds) to accommodate the demand for a store of value which seem to be more advantageous to the agents than to hold Dollar notes, this route will be pursued first. Similarly, the degree in
When the last remaining function (the means-of-payment function) is no longer performed by the national currency and the Dollar naturally assumes it, dollarization is fully achieved. When this occurs, however, the monetary contractual system cannot work in stable terms any more, for the complete deterioration of the national money provokes the disarray of its institutional and legal order. In such a situation, there is no recognized power to enforce contracts, for no national institution has either control over or power to legislate on a foreign currency. In other words, in a fully dollarized economy there is no mechanism to guarantee, through legal procedures, the transfer of means of payment in terms of the foreign currency (i.e. Dollar notes) to discharge the contracts established in terms of Dollars. As Belluzzo and Almeida (1992b: 13, translated by this author) affirm, dollarization "corresponds to the development of the crisis, not to its solution, for it is not capable of restoring confidence in a monetary standard that, in strict terms, at this moment, does not exist at all". Accordingly, the process of dollarization can be viewed as a special case of evolution and deterioration of a high inflation regime in which, because of the institutional features of a specific national economy, it is the Dollar and not other financial assets that assumes the functions of the progressively neglected national currency.

In these terms, then, one could be tempted to understand the "full" dollarization proposed by Dornbusch et al. (1990: 60) as nothing more than a proposal to accelerate the completion of the process of deterioration of the institutions that enhance social cohesion in market economies. It is evident, however, that it is not the case. Dollarization is being which the Dollar will be used as standard of value will depend on the degree of openness of the economy, for the higher that degree the more economically significant the exchange rate, and vice-versa. Therefore, in economies with a low degree of openness, other domestic indices are usually taken as alternative standards of value (Franco, 1991: 65-8).
suggested, in fact, as a preliminary step in a more comprehensive solution to the inflationary crisis, as a means to stabilize the economy. The rationale for this proposal seems to be two-fold. On the one hand, it alludes to the stabilization plans adopted to control the classic hyperinflations of the past, which were successful because the process of dollarization had already reached its completion. On the other hand, it refers to the extremely slow process of *de facto* dollarization which occurs in many countries suffering chronic high inflation and so to the need to accelerate the dollarization to adopt a successful stabilization plan.39

However, even when regarded as a necessary step of a stabilization policy the meaning of dollarization is ambiguous. According to Lara Rezende (1992: 115), there are at least three distinct meanings attributed to the term dollarization as a deliberate stabilization mechanism. The first and more radical connotation in which the term is employed means the complete substitution of the Dollar for the domestic currency; in this case the Dollar would perform all the functions of money. The second and less radical usage of the term is associated simply with the rigid fixing of the exchange rate of the domestic currency to the Dollar, with the guarantee of convertibility between the two currencies; however, only the domestic currency would be enforced as means of payment. The third meaning, in turn, is a mix of the former two: not only would the exchange rate between the two currencies be fixed and their convertibility guaranteed; the concurrent circulation and use as means of payment of both the domestic currency and the Dollar would be permitted as well.

The first alternative departs from the recognition of the advanced

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39 The slowness of the process of dollarization in modern economies suffering high inflation is due to the existence of other alternatives (several indices, indexed financial assets, etc.) which compete with the Dollar for the preferences of the agents regarding the performance of the functions of money.
process of spontaneous dollarization. However, instead of waiting for both
the complete deterioration of the national currency and for the creation
of the necessary conditions for stabilization which hyperinflation
provides, it proposes the immediate full adoption of the Dollar as the
national currency. By allowing the Dollar to perform all the functions of
money (i.e. by giving up the defence of the national currency even if only
as the legally enforced means of payment), the unity of the functions of
money would be restored and so would be the institutional stability
required for the establishment of contracts. Despite its apparent
soundness, it is not difficult to dismiss this first alternative as
extremely costly both in economic and political terms. This is so because,
besides implying the abdication of the gains of seigniorage and much of the
control over the monetary, fiscal and exchange rate policies, this
alternative damages, sometimes irrevocably (given the difficulties in
abandoning it once adopted), the political sovereignty of the country which
adopts it. Furthermore, it could only be attempted in an economy without
many alternatives for the Dollar as substitutes for the progressively
abandoned national currency; i.e. in an economy without other assets which
could equally perform some of the functions of money. And as most of the
modern economies suffering high inflation were able to develop
institutional devices to keep the unity of the functions of money despite
the rise in prices, the process of deterioration of confidence in the
national currency is not always accompanied by the dollarization of the
economy in this strict sense. At the very least the Dollar has to compete
with other assets as the more reliable instrument to perform the functions
of money. It is in regard to these more sophisticated economies, therefore,
that the two other alternative proposals of dollarization apply.

The attractiveness of these proposals lies firstly in the fact
that fixing the exchange rate between the national currency and the Dollar would provide producers with a reliable and stable standard of value (the Dollar) which could be "translated" in terms of the legal means of payment (the national currency) at a stable parity whenever necessary. Secondly, it would promote the stabilization of the terms of convertibility between reliable stores of value (e.g. Dollar notes) into the legal means of payment. In this sense, dollarization of the economy would create a new and stable set of institutions which would provide agents with the elements to increase their confidence in the stability of the processes of convertibility and representativeness between the instruments which perform the functions of money. Put another way, dollarization would restore the unity of the functions of money without having to abdicate the use of the national currency as the only legally enforceable means of payment.

Once this institutional stability becomes a convention to be followed without much deliberation, the confidence in the domestic currency will have recovered, such that contracts begin to be indistinguishably established in Dollar or in the domestic currency. Similarly, the stability of prices retains the attractiveness of the domestic currency as a store of value; it begins to compete with the Dollar in the preferences of agents. In the limit, the degree of success of the dollarization plan would be given by the degree to which the domestic currency rescued its capacity to perform the main functions of money. In this sense, the dollarization plan can be regarded, paradoxically, as a de-dollarization plan; i.e. as an attempt at reversing the process of deterioration of the unity of the

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Despite an apparent similarity between this proposal and the "imaginary" money systems adopted in pre-modern economies, they differ on an essential point: as opposed to what happened in the "imaginary" money systems, where "domestic" devaluations could and did occur, the dollarization plans clearly establish both the need and the instruments to fix the exchange rate between the standard of value (Dollar) and the means of payment (the national currency).
functions of money through the acceleration and intensification of its effects. Yet whereas in the classic hyperinflations of the past this process happened spontaneously in a brief span of time, the more complex mechanisms of defence developed by modern economies suffering high inflation delays the process and urges the government to accelerate and intensify it artificially. Thus, dollarization in its looser sense is an attempt at rapidly replicating, in sophisticated high inflation regimes, the conditions for stabilization that hyperinflations created spontaneously in less sophisticated economies in the past and which are much delayed by the institutional features of those regimes. Moreover, it aims to reach these results without having to expose modern economies to the social suffering hyperinflation entails, being an institutional short-cut to reach those conditions.

Dollarization, then, would create the basic necessary conditions for the implementation of a monetary reform. To be successful, however, the dollarization programme requires the maintenance of the established exchange rate over time. The stability of the rate of convertibility between the two currencies at an established parity depends on the capacity of the government to maintain a level of international reserves high enough to counteract any speculative move and therefore to lull the fears of the producers regarding the continuity of the exchange rate. Thus, the first problem the proponents of this alternative have to face is to decide just how large the relation between foreign reserves and the stock of domestic currency should be to maintain the confidence of the producers in the stability of the exchange rate.

The adequate level of international reserves are conditioned by some structural characteristics (both institutional and behavioural) which vary from country to country and from time to time. Firstly, it will depend on
the state of confidence of private agents in the capacity of the government to maintain the convertibility between the domestic currency and the Dollar at the chosen parity. The more unstable the economy of a country, the weaker that state of confidence and the higher the reserves necessary to strengthen it. Secondly, given the state of confidence, it will depend on the degree of current and potential monetization of the economy; i.e. the level of reserves must be in accord not only with the current value of M1, but also with the degree of ease with which the financial wealth kept in M2, M3, M4, etc., can be converted into M1, thereby constituting a potential threat to the maintenance of the chosen exchange rate. Put another way, the higher the liquidity of the financial instruments which compose those broader monetary aggregates, the higher the reserves necessary to maintain the confidence of the agents in the stability of the exchange rate over time.41

Ideally, then, the level of international reserves should be as high as possible, for, the higher that level, the higher the credibility in the maintenance of the exchange rate over time and the greater the capacity of the government to offset any sudden change in that credibility. It is obvious, however, that the stronger the relation between the foreign currency reserves and the stock of domestic currency, the greater the efforts necessary to obtain and maintain it.42 Thus, the government is

41 Three measures are commonly proposed to prevent this transfer of wealth from broader monetary aggregates (M3, M4, etc.) into M1 or at least to reduce its negative effects. Firstly, to raise the interest rates of the non-dollarized financial assets. Secondly, to devalue the domestic currency before the establishment of a fixed exchange rate, as a form of reducing the value, in terms of Dollars, of the financial assets held in those monetary aggregates. Finally, to promote a compulsory conversion of the highly liquid financial assets into long-term non-liquid dollarized bonds (Franco, 1993: 36-7).

42 This effort is particularly big for large countries (for the absolute magnitude of that relation will vary according to the dimension of the economic space in question) and for countries with a low degree of
faced with a trade-off between the facility to mobilize a level of reserves regarded as adequate and the difficulty in convincing private agents of the adequacy of that level.

The success of a dollarization plan depends on several factors. First, as argued above, it requires the maintenance of an adequate level of reserves, which depends on the capacity of the country to maintain a high degree of competitiveness of its exports. Second, it requires the existence of some external conditions without which the dollarization plan is likely to fail. As the maintenance of a fixed exchange rate between two currencies presupposes that one of them be anchored in the stability of the other, the existence of a strong, hegemonic and reliable national currency is implicitly assumed. In other words, it requires the economic hegemony of a country within a certain international economic space (Eduardo Carvalho, 1992b: 353–4). As a consequence, if such a solid and undisputed external basis on which the dollarization plans must be anchored does not exist or is being contested, the chances of maintaining the stability of the parity between the currencies are severely reduced. Moreover, and still related to the external conditions on which dollarization depends, it is important to note that the more developed and dynamic the world trade activities, the easier the accumulation of large trade surpluses and international reserves. Conversely, a world recession may damage the capacity of some countries to amalgamate the volume of reserves necessary to implement a dollarization plan successfully.

Another important element refers to the great capacity of both openness to the world economy (for the lower that degree the more difficult to assemble the necessary amount of foreign currency through the generation of large trade surpluses) (Franco, 1991: 70). Additionally, it is worth noting that for highly indebted countries it is still more difficult to accumulate and maintain the adequate level of reserves, given the transfers they are obliged to make to the creditors (either other countries, private banks or international financial institutions).
institutional and behavioural adaptation of modern economies, which, paradoxically, creates rigidities for the implementation of a stabilization plan based on dollarization. As Bresser Pereira and Ferrer (1991: 11) point out, the classical hyperinflations of the past and the parallel dollarizations which accompanied them were very rapid processes, one being the counterpart of the other. Due to the almost nonexistent capacity of adaptation of the countries which suffered hyperinflation in the past, the explosion of prices provoked the quick displacement of the domestic currency from its functions and created a void which was immediately fulfilled by the Dollar. However, as soon as this process reached its peak, stability was achieved and the conditions for the implementation of a monetary reform and the replacement of a new domestic currency for the Dollar were given. Although the nature of the process is the same for the modern economies which suffer chronic high inflation and developed a high inflation regime, neither the velocity at which it occurs nor the assets used to replace the national currency are quite the same. Actually, through the implementation of sophisticated institutional devices, the agents learn to live with the process of destruction of the national currency.

The specific form of adaptation to inflation taken by modern economies poses some difficulties for the implementation of dollarization plans. Firstly, it is accommodating enough to create a political inertia against any radical attempt at stabilizing the economy. For those agents who have access to the institutional defences against the debasement of their wealth in a high inflation regime (typically, these agents are also politically well-placed) any attempt to introduce drastic changes seems to menace their relatively safe position in society. This is a difficulty that dollarization shares with any other attempt at implementing radical monetary reforms in a high inflation regime. Secondly, the availability of
several financial instruments and sometimes the existence of legal restrictions against the use of Dollar create asymmetric degrees of the use of the Dollar as an alternative to perform the functions of money. As a consequence, the fixing of a parity between the national currency and the Dollar may not have the effect of quickly restoring widespread confidence in the domestic currency. Instead, that potential outcome may be delayed to the point of damaging the localized confidence the plan may eventually win when first implemented. Thirdly, the stability of the exchange may be threatened by residual domestic inflation which may continue to exist for some time even after the implementation of the dollarization plan. If the domestic inflation is higher than the inflation in the country which issues the foreign currency employed as the anchor for the domestic currency, the established exchange rate will soon be regarded as being overvalued. In the case this overvaluation of the national currency begins to threaten the capacity of the country to generate the trade surpluses necessary to maintain the adequate level of international reserves, pressures for a devaluation of the domestic currency will emerge. However, if a devaluation actually occurs, or even if it is simply expected, it will undermine the stability of the exchange rate, thereby destroying the basic rule on which the dollarization is based. To be successful, then, a dollarization plan which actually aims to achieve the ultimate de-dollarization of an economy operating under a high inflation regime must include mechanisms of either persuasion (e.g. a social pact) or coercion (e.g. a price freeze or exchange control), so that defensive behaviours of the agents can be modified (Franco, 1993: 39-41).

In order to surmount some of these problems, Lara Rezende (1992: 116) proposes the creation of a currency board. According to his proposal, the currency board would act as the independent issuer of a new currency which
could be converted, at any time and at a fixed parity, into the Dollar. The guarantee for its convertibility would be given by the obligation of the board to maintain international reserves of the same magnitude as the stock of the new currency. However, whereas in the traditional dollarization process the exchange rate between the domestic currency and the Dollar is fixed once and for all, in Lara Rezende’s proposal the domestic currency and the currency issued by the currency board would initially circulate concurrently without any established exchange rate between them. In this way, residual inflation in terms of the old currency would not pose any risk for the stability of the plan, for the exchange rate between the domestic currency and the new currency could vary freely without affecting the parity between the latter and the Dollar. Moreover, this proposal assumes that gradually the agents would prefer both to establish and to discharge their contracts in terms of the new currency, for its value is pegged to the Dollar and therefore not exposed to the instabilities of the domestic currency. Eventually, when virtually all contracts were expressed and settled in terms of the new currency and the old one had no more economic significance, the economy would be finally liberated from the disturbing effects of inertial inflation. At this moment, the government could establish a fixed exchange rate between the old domestic currency and that issued by the currency board. Similarly to what happened in the classic hyperinflations, the inflation in terms of the old currency would be brought to a sudden halt and it could once again perform the main functions of money (ibid: 116-7).\(^4\) Thus, by mediating the relation between the domestic currency and the Dollar with a currency backed by a

\(^4\) Alternatively, the government could introduce a new currency and fix the exchange rate between this and the currency issued by the currency board. The rationale for this alternative is to cut any connection between the current situation of stability and the inflationary past.
currency board, this proposal avoids some of the pitfalls of the traditional process of dollarization and creates some of the institutional and behavioural conditions for the stabilization of the domestic currency.

However, the more important factors which must be taken into account when considering a dollarization plan (including the proposal for a currency board) are those internal elements which may put insurmountable pressure on the maintenance of the stability of the domestic currency after the completion of the plan; i.e. when the process of dollarization reaches its apex and the de-dollarization of the economy can be effected by a monetary reform. This is so because when the national currency is freed from its attachment to the stability of the Dollar, its value will depend mainly on internal factors. If the original causes of inflation (i.e. those which had provoked the deterioration of the capacity of the old national currency to perform all the major functions of money) are still present, the new or restored currency will almost certainly suffer the same effects the old one did. As Belluzzo and Almeida (1991: 60, translated by this author) assert, "it is illusory to imagine that the definition of a nominal anchor – the convertibility of the currency at a fixed rate – will eliminate the conflicts which evolve through the monetary crisis". In fact, dollarization must be understood only as an auxiliary mechanism of transition between two distinct regimes: from a high inflation regime to a low inflation regime. That is, dollarization is only an auxiliary mechanism for restoring the unity of the functions of money. Although it temporarily suspends the deleterious effects of high inflation and creates the necessary conditions for stability in the implementation of a monetary reform, dollarization does not abolish the original causes of inflation. In order to install a stable low inflation regime it is necessary, simultaneously with the adoption of dollarization, to tackle those causes
(e.g. fiscal deficits, imbalances in the external sector, lack of competitiveness, etc.) in an unequivocal way.\textsuperscript{44}
= focus gains

= focus losses
CHAPTER 5. THE ORIGINS OF THE BRAZILIAN HIGH INFLATION REGIME

5.1 Introduction

In the early sixties, after five years of intense growth and moderate levels of inflation, the Brazilian economy was experiencing recession associated with inflation levels high enough to disturb the confidence in the unity of the functions of money (Table 5.1). Despite high inflation, however, that confidence was restored and maintained in Brazil almost to the very end of the 1980s, thereby preventing contractual relations from collapsing and creating the most basic conditions to maintain the productive circuit in operation. That result was only made possible because of continuous institutional and behavioural adaptations carried out over that period, whereby the Brazilian high inflation regime was constituted. In this context, the first objective of this chapter (section 5.2) is both to explain the emergence of that regime and to examine its main features. It will be argued that the emergence of the Brazilian high inflation regime is intrinsically connected to the institutional reforms adopted by the government in the mid-1960s to control inflation and to resume the growth path of the economy. Concurrently, it will be shown that its distinctive features were the development of indexed contracts and the introduction of indexed assets.

From 1968 the economy expanded again. Moreover, inflation was greatly reduced; so much so that the importance of the institutional framework of the high inflation regime decreased during the ensuing years. From 1974, however, the economy was decelerating. Simultaneously, inflation recommenced to accelerate (Table 5.1). In response to that acceleration, the institutions of the high inflation regime resurfaced as important elements to maintain the unity of the functions of money. The second
objective of this chapter is to examine how that institutional framework evolved in the second half of the 1970s from what had already been implemented in the mid-1960s (section 5.3). It will be argued that this process was the unplanned outcome of the counter-cyclical policies adopted by the government in 1974 and pursued in the following five years.

Although successful in their most immediate objectives (to maintain the growth of the economy), those policies progressively provoked a rise in external debt, an increase in public debt, and the further acceleration of inflation. These imbalances were further aggravated by the sudden change in the international environment in 1979. The government attempted to solve these inconsistencies and still maintain the strategy of growth within the new international scenario. This proved impossible and the inconsistencies were thrown into even sharper relief. Moreover, between 1979-80 there were signs that the institutional framework of the high inflation regime no longer guaranteed the unity of the functions of money. In such a context, the third objective of this chapter is to explain the causes of the increased fragility of that regime (section 5.4). It will be claimed that this process was the unintended outcome of the strategy followed by the government in the late 1970s. In response to the ensuing disorganization of contractual relations, the government had to retract and to introduce institutional changes which would give the contour of the new Brazilian high inflation regime in the 1980s.

5.2 Institutional Reforms and the Emergence of the High Inflation Regime

The magnitude of the Brazilian crisis in the early 1960s in its diverse dimensions - economic, social and political - associated with the incapacity of the political parties to elaborate a strategy to solve it within the limits of legality, led to the rupture of the democratic order
and to the installation of a military regime. It was then the first administration of this new regime, which took power in 1964, that had to face the duty of implementing policies to solve the economic crisis.

According to the official view, it was mainly accelerating inflation, leading to the paralysis of private investment (both national and foreign) and causing distortions in the capital and credit markets, that was preventing the economy from continuing the path of growth observed in the late 1950s. This was so, affirmed the new government, because under high and rising inflation rates financial institutions could neither attract savings nor lend on a long-term nominal basis, as was necessary to fund new investments (Almeida, 1984: 3). The main cause of inflation, however, was to be found exactly in the inefficiency of the financial system, which had not developed the long-term financing mechanisms necessary to fund both private and government investments (Serra, 1982: 79).1 Faced with such underdeveloped funding mechanisms, governments had no alternative way of continuing to finance their recurrent deficits but to expand the primary means of payment. Private firms, in turn, continuously increased their mark-ups as a form of repaying the short-term loans provided by the banking system. Not surprisingly, then, the result of the combination of lack of funding mechanisms and the strategies followed by both the government and private firms to finance their expenditure was the permanent rise in prices (Studart, 1992: 143).

Given that diagnosis, the action of the first military government was two-fold. On the one hand, a short-term stabilization plan was implemented to reduce the need for finance by both the government and the private

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1 According to Almeida (1984: 4), the two main causes of the underdevelopment of the financial system were the existence of a usury law which limited the rate of interest to a maximum of 12% per year and decades of lack of competition among the financial institutions.
sector, thereby attacking the more immediate cause of inflation. In short, the strategy was to induce a severe recession. The plan included rigid control of credit expansion, a reduction in governmental expenditures and the control of wage rises. On the other hand, a set of deeper economic reforms was conceived and implemented to settle the ultimate cause of inflation, which was the absence of non-inflationary long-term financing mechanisms. It is in the context of these reforms that the emergence of the Brazilian high inflation regime can be assessed.

In order to create non-inflationary financing mechanisms for the government, a fiscal reform was implemented in 1966, being preceded by an emergency reform in 1965. Besides more traditional measures, such as government expenditure cuts, the increase in tariffs of the public sector and the widening of the range of taxable income, one particular measure appeared as an important innovation: an indexed bond, called ORTN – Obrigaçao Reajustavel do Tesouro Nacional (Readjustable National Treasury Bond), was introduced. The introduction of an indexed bond was the mechanism found to finance public deficits through public debt during the transition from a high inflation to a low inflation environment. In this sense, as Almeida (1984: 23) asserts, the indexed bond was originally conceived only as a transitory mechanism, which would serve to finance the government until the transition to a non-inflationary order had been completed.

The value of the bond was linked to the price index which measured domestic monthly inflation, called IGP – Indice Geral de Preços (General Price Index) and would yield 6% per year over its monthly readjusted

\[^2\] In order to guarantee the execution of the required tight monetary policy, a central bank was created. The Central Bank would be responsible for the enforcement of the monetary, credit and exchange rate policies set by the CMN – Conselho Monetário Nacional (National Monetary Council), instituted at the same time.
nominal value. Although initially issued as a medium to long-term bond (its minimum maturing-term was initially fixed at three years), it was soon realized that to increase its attractiveness – and to make it competitive with other available forms of storing wealth (e.g. bills of exchange) – it was necessary to issue short-term indexed bonds and to offer some advantage for those who decided to trust the government. As a consequence, still in 1965, the maturity of ORTNs was reduced to one year, part of the value of the bonds bought (up to 30% of the total subscribed) could be discounted from the gross income subjected to income tax and the amount which represented monetary correction was also exempted from taxation. Moreover, to consolidate the role of ORTNs as a potential instrument for storing wealth, the buyer was permitted to opt for an alternative index (the exchange rate variation) at the maturity date. As it was an ex-post choice, it represented an additional security for those who were financing the government (ibid.: 43-4).

In order to create non-inflationary mechanisms for the private sector, the government implemented a financial reform. This reform was intended to create a segmented financial system, so that specialized financial institutions would be responsible for financing specific sectors. As a form of making the establishment of debit/credit relations in an inflationary environment feasible, the government introduced the concept of indexed financial contract, so that the nominal values of both

\[^{3}\text{In this assumedly more efficient system the financing banks would provide credit for the acquisition of consumer durable goods, the commercial banks would finance working capital for the firms and the investment banks were expected to finance long-term investment projects. Moreover, in order to stimulate the housing sector, which was regarded as a priority within the economic and social strategy of the government, the Housing Finance System (SFH) was created. This system included the National Housing Bank (BNH) as its central bank and lender of last resort to the private institutions which took part of it. The operations of the BNH were supported mainly by the compulsory savings of FGTS (Job Tenure Guarantee Fund) (Belluzzo and Almeida, 1992a: 27).}\]
the financial bonds issued by private financial institutions and the credits (loans) could also be indexed to the price index which corrected the value of the ORTNs (Belluzzo and Almeida, 1992a: 28). In this sense, indexation was regarded as a neutral instrument which would create the conditions to attract savings and to stimulate long-term lending even under high levels of inflation. Moreover, and similarly to the indexed bond, the indexation of contracts was thought to be only a temporary device to be used by the financial system during the transition to a low inflation environment.

As part of the economic reforms, measures were also taken to stimulate the use of foreign savings, for it was acknowledged that there were excessive regulations obstructing the use of foreign funds to finance domestic investments. Among these measures, two must be mentioned for their subsequent importance: (i) the sanction, in 1964, of the already existent Law 4131 of 1962, which permitted domestic firms to contract loans abroad; (ii) the promulgation, in 1967, of Resolution 63, which permitted the contracting of loans in foreign currency by domestic financial institutions in order to be split into Cruzeiro-denominated loans of shorter maturity. Additionally, from 1968, an exchange policy pegging the Cruzeiro to the American Dollar was introduced. According to this policy, the Cruzeiro

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4 From 1968, the National Housing Bank would both index housing contracts and implement indexed savings accounts to attract voluntary savings to be invested in housing projects. These accounts were to become very popular during the next two decades, being progressively implemented by most of the private banks. Similarly, the value of taxes were indexed to past inflation, thereby eliminating the then existent stimulus to delay the payment of fiscal debts. Moreover, as a form of reducing the spreads between borrowing and lending rates (regarded as contributing to inflation), the government established that bills of exchange should also be indexed (Studart, 1992: 166).

5 Despite these measures, the Central Bank still maintained control of the transactions involving foreign currency, for they could only be carried out if the Central Bank had previously given its approval as to the volume and financial costs of the operation (Silva, 1979: 22).
would be devalued against the Dollar, on average every three weeks, by the difference between the inflation rates in Brazil and in the United States, such that the variation of the exchange rate was consistently below the variation of domestic inflation (Silva, 1979: 21). Moreover, Cruzeiro-denominated loans contracted abroad - either directly (via Law 4131) or indirectly (via Resolution 63) - also possessed the legal alternative of being indexed to the foreign currency (Mendonça de Barros, 1991: 4). This prerogative, given the rules of the so-called minidevaluations, created obvious advantages for borrowers who contracted loans abroad, for doing so they could index their debts in terms of a permanently undervalued foreign currency.

Although indexation was regarded as functional only until the moment inflation was high enough to provoke fears of loss of the real value of nominal contracts, it occupied a central role in the preliminary strategy of the government to create non-inflationary financing mechanisms. On the one hand, a financial system which offered indexed assets (sometimes still offering the option of choosing the index to be used to correct the value of the bonds) would easily attract savings (both domestic and foreign) to fund the domestic investment, for indexation would protect the savers from losses caused by inflation. On the other hand, the transformation of those savings into long-term indexed loans would neutralize any additional risks for the financial system associated with the devaluation of nominal values.

But besides that intended and transitory role, indexation had also an unintended and more enduring function: the indexation of government bonds, in particular, and of monetary contracts, in general, was the centrepiece of the constitution of the Brazilian high inflation regime. This was so because indexation provided the elements necessary to restore
the unity of the functions of money at that initial moment of restructuring of the Brazilian economy, still under the disruptive effects of high inflation. That is, indexation provided the elements necessary to restore confidence in the stable operation of the institutional mechanisms whereby the distinct monetary and financial instruments which perform the functions of money are convertible into each other. In this sense, it was at the core of the high inflation regime which emerged as an unplanned outcome of the institutional reforms then adopted.

The Brazilian high inflation regime developed two main features. First, the value of monetary contracts established in Cruzeiro could be indexed to a price index (or, in some specific cases, to the variation of the exchange rate between the national currency and the Dollar) and be discharged through the delivery of Cruzeiro-denominated means of payment (notes, coins, cheques, etc.). That would be a guarantee that the amount of means of payment delivered to the payee when the contracts were discharged would represent the same value (i.e. the same purchasing power) agreed to be delivered when the contracts had been established. Thus, if the nominal (Cruzeiro) values of contracts were readjusted according to the variation of the chosen index, inflation would not interfere with the stable relation of representativeness between the standard of value (Cruzeiro) and the legally enforced means of payment. Such institutional arrangements, however, were only made possible because there was confidence in the enforcement of the laws which regulated the relation of representativeness among those instruments. On the one hand, there was confidence that the price index adopted to correct the nominal values of the contracts (IGP) was the best available indicator of the variation of domestic inflation. On the other hand, there was confidence in the maintenance of the rule which governed the policy of minidevaluations of
The second main feature of the Brazilian high inflation regime was the existence of indexed assets issued by both the government (ORTNs) and the financial system (e.g. savings deposits and time deposits), which attracted the preferences of the agents as reliable instruments for storing wealth even in a context of high inflation (Table 5.2). While those indexed assets provided both the government and financial agents with resources they needed, they also protected the producers against the devaluation of their liquid wealth caused by inflation. Once again, however, their ability to function as store of value depended on the widespread confidence in the commitment of both the government and the private financial institutions to maintain the rules of indexation for the assets.

Although indexation did serve to stabilize contractual relations at that moment, it neither stimulated those relations in the desired magnitude nor was it as widely used as was intended. As to financial contracts, this "failure" might be due to the fact that although indexation can prevent the lender from assuming the risk of having his wealth devalued by inflation, it introduces two other different risks: (i) to the lender, the risk that both the indexes and the intervals used to correct the value of the contracts do not properly make up for the losses caused by inflation; (ii) to the borrower, the risk that the value of his particular proceeds does not rise as much as the index used to correct the value of his liabilities (Belluzzo and Almeida, 1992a: 28). Thus, although there was an increase in

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As Silva (1979: 56, translated by this author) asserts, there was no automatic maintenance of the policy of devaluing the Cruzeiro to make the establishment of contracts in terms of the foreign currency advantageous for the internal borrower: "The Central Bank exerts absolute discretionary control over the level and the frequency of the readjustment of the exchange rate". However, there was a high degree of confidence in the maintenance of that policy.
the use of some specific indexed financial contracts, the fear (from lenders and borrowers alike) of entering into indexed contractual relations prevented the bulk of the private financial system from developing indexed long-term operations.

There is, however, a more general reason for the only partial adherence to the institutional framework of the high inflation regime. By 1970, as a result of the orthodox stabilization plan adopted in the mid-1960s, inflation had reached low levels when compared to those of the early 1960s, decelerating still further in the following years (between 1970-73 annual inflation was below 20%). At such levels, inflation began to be considered low and stable enough to make indexation of monetary contracts to the variation of the general index of prices unnecessary. Moreover, as the economy started to grow at very high taxes (Table 5.1), the costs of inflation could be more easily absorbed without the need to resort to indexation than in the preceding situation of stagnation. In this sense, one can say that there was the beginning of a transition from a high inflation regime to a low inflation regime. Indeed, indexation clauses were progressively disregarded in domestic financial contracts in favour of a fixed nominal interest rate based on expected future inflation. Furthermore, in this context of changed expectations the preference for

\footnote{For instance, those who wanted to incur housing-related loans or to have access to long-term loans from the Development National Bank – BNDE – had to accept the indexation clauses, thereby assuming the borrower’s risk. Besides, some specific protective clauses (such as discounted indexation to loans provided by the government) were offered to some fragile although strategic sectors (e.g. agriculture), thereby stimulating the acceptance of indexation.}

\footnote{In this context, only the government decided to assume both the lender’s and the borrower’s risks: by financing long-term investments, it assumed the lender’s risk; by discounting the plain indexation from the loans the fragile sectors contracted with the government (i.e. by subsidizing them), it assumed others’ borrower risk. For a discussion of the reasons why the financial institutions were against the indexation of their liabilities, see Studart (1992: 168-9).}
ORTNs as an instrument to store value decreased and the growth of the participation of savings accounts, bills of exchange and indexed time deposits among the main financial assets greatly decelerated. In contrast, there were indications that domestic savings were being progressively allocated in LTNs – Letras do Tesouro Nacional (National Treasury Bills). Having been issued for the first time in 1970 and offering fixed nominal interest rates, the LTNs almost doubled their participation among the main financial assets between 1971-73 (Table 5.2). Accordingly, although formally existing in the early 1970s, the mechanisms of domestic indexation and the whole institutional apparatus of the high inflation regime were being progressively disregarded as essential for the establishment of monetary contracts.$

In 1974, however, inflation accelerated again. As a consequence, there was an enormous disorganization of the then non-indexed contractual relations and, therefore, of the newly emerged low inflation regime. In these circumstances, indexation to past inflation was once again required as a form of protection against the loss of wealth. There was also a shift of financial resources from applications based on nominal interest rates to those indexed to past inflation (mainly ORTNs and savings accounts) (Table 5.2). Accordingly, one can say that one of the major outcomes of the reversion of the inflationary process in the mid-1970s was the reinforcement of both the institutional and the behavioural features of the high inflation regime. The main characteristics of this return to a high inflation regime, however, can only be purposefully assessed if some major aspects of the Brazilian economy in the 1970s are brought into

$\text{However, as for all this period the correction of the exchange rate was systematically inferior to domestic inflation, there was an increase of the volume of the contracts indexed to the American Dollar through the legal mechanisms for contracting loans in terms of a foreign currency (Law 4131 and Resolution 63) (Mendonça de Barros, 1991: 5).}$

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consideration.

5.3 The Brazilian Economy in the 1970s

In 1968, the Brazilian economy began a period of fast growth which would continue until 1973 (Table 5.1). During its first years, this recovery was mainly based on the growth of production, leading progressively to the occupation of idle productive capacity inherited from the previous period of recession. From 1970, however, high levels of utilisation of the productive capacity had been reached. As a consequence, the demand for long-term loans to fund new investments grew at such a high speed and in such great volume from that year that neither the ill-equipped and fearful private financial system nor the government alone were able to cope with it. In this setting, the international financial system performed a most important role, providing domestic firms with an additional source of medium and long-term loans (Belluzzo and Almeida, 1992a: 29).

As a result of this substitution of international for domestic long-term financing, there was an enormous growth in the external debt. It must be emphasized, however, that this ingress of external funds was not prompted by a scarcity of domestic resources to finance the imports associated with the growth of the economy. As a matter of fact, the trade balance did not put any significant pressure on the Brazilian external accounts during this period (1969-73) (Table 5.4). But despite the existence of domestic resources to finance the growth of the economy, the domestic financial system was unable to transform those resources into long-term loans, thereby requiring the more institutionally developed

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10 Between 1970-1973 the capital goods sector grew 22.7% per year (Table 5.3).
international financial system (Davidoff Cruz, 1984: 17). In this sense, although able to finance private expenditure, the domestic financial system was unable to fund long-term investment.

It is important to note that the substitution of international for domestic funding became a feasible strategy to be followed only for two reasons, one resulting from changes in the Eurodollar market and one rooted in domestic policies. The decision taken by the American government in the late 1960s to finance deficits in the balance of payments of the United States through the issuing of liabilities to be held by other developed countries led to a great expansion of liquidity in the international capital market, which was thus able to provide longer-term loans and lower spreads than formerly. However, the increased supply of international resources could only be used to balance the demand for long-term finance in Brazil due to both the institutional changes introduced to stimulate borrowing abroad (Law 4131 and Resolution 63) and the maintenance of the policy of devaluing the Cruzeiro below the level of domestic inflation (Table 5.5). 11 Thus, although the reform of the domestic financial system had not been successful in the creation of adequate mechanisms to fund a huge volume of long-term investments internally, it generated institutional mechanisms which allowed the demand for long-term finance to be met through the contracting of foreign loans either directly or mediated by the domestic financial system. In this sense, the financing system of the Brazilian economy was strongly connected to and functionally integrated with the international financial system, which was eagerly looking for opportunities for investing its capital.

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11 The dimension of the stimulus provided by this policy can be assessed when one considers that, between 1969-73, the value of the contracts indexed to domestic inflation increased 35% more than the value of those established in terms of the American Dollar (Silva, 1979: 52).
In 1974, there was a reversal of that trend of growth. On the domestic side, economic indicators were showing evidence of growth deceleration, a consequence of the fact that both public and private investments had increased productive capacity faster than the growth of current demand during the so-called "economic miracle" years (1970-73). That is, the capital goods industry had expanded beyond the level at which current demand could absorb its potential production (Belluzzo, 1984: 98). At the international level, in turn, the first oil shock and the deceleration of the growth of the world economy would add to the domestic problems. Firstly, there was a sudden rise of domestic prices (Table 5.1), for oil is a general-use input. Furthermore, this direct impact on prices was compounded by the sudden and unexpected character of the oil price rise. This caused the rupture of the conventions concerning the future behaviour of oil prices and induced a speculative rise of mark-ups as a form of protection against future shocks (Carneiro, 1991: 192). Secondly, the trade balance also deteriorated, both because of the rise in the price of imported goods and as a result of the fall of the volume of exports (due to the international recession between 1974-75). Furthermore, as 1974-75 were years in which the liquidity of the international financial system shrank, there was a simultaneous rise in international interest rates, which provoked an increase in net interest payments over the period (Table 5.4). In this sense, from 1974 there was a cessation not only of the favourable "real" conditions which had propelled the Brazilian economy into several years of fast growth. The favourable financial conditions of the previous five years had disappeared as well.

The analysis of the response of the government to the disintegration of the conditions – both at home and abroad – which had allowed high levels of growth associated with moderate levels of inflation for five years is
crucial to understand the behaviour of the economy in the following years. The government opted for a policy which could both stabilise the balance of payments and sustain the high levels of growth observed in the previous years.¹² To conciliate these objectives it formulated the ambitious Second National Development Plan (II PND), which aimed at maintaining high levels of investment through a programme of import substitution concentrated on the basic input sector and capital goods industries. The intention was to reduce Brazil's dependence on foreign resources and, simultaneously, to make the demand for these goods endogenous and no longer dependent on the current demand of other sectors of the economy.¹³ At the same time, in a shorter-term perspective, the export sector would be given incentives to increase its performance in order to reduce the trade deficit.

The plan, however, was implemented in an unfavourable moment at both the international and the domestic levels. On the international side, the world recession of 1974-75 would frustrate the intentions of increasing exports. Domestically, in turn, the private sector had been so badly affected by the reversal of the tendencies of growth that new investments were much reduced. Under these circumstances, the conciliation of the two objectives of the plan could only be reached through both the deepening of the external indebtedness and an increase in the role of the government as an investor and financier of private expenditure. Not surprisingly, therefore, the pursuit of this strategy had a strong negative impact on both the external accounts and the public finances. Paradoxically, however,

¹² The decision to try to maintain accelerated growth even under such unfavourable conditions was intended to conciliate the interests of the diverse political and economic agents which sustained the military regime (Carneiro, 1991: 14).

¹³ Given the incapacity of the domestic financial system to provide funding for new investments, the strategy of reducing Brazil's dependence on foreign resources paradoxically implied the deepening of that dependence, at least in the short term.
it gave consistency to the institutional setting which maintained the unity of the functions of money even under increasing inflation rates in the second half of the 1970s. In this sense, it is in the context of the response of the government to the deceleration of the economy that the Brazilian high inflation regime regained importance and had its institutions further developed.

5.3.1 The Foreign Debt

Between 1974-76 Brazilian foreign debt rose significantly. Although mainly caused by the worsening of the trade deficit, the rise also reflected the need to pay the net debt services outlays (Table 5.4). The data show that, as a result of both the increase of the stock of the debt and the rise in interest rates and spreads prevailing in the international financial system, the cost of the debt itself had begun to operate both as a propagator and as an amplifier of external imbalances (Davidoff Cruz, 1984: 21). The external debt rose significantly again between 1977-78. This time, however, the trade deficit was not one of the major factors responsible for this increase. Instead, the recovery of activity in the industrialized countries and the reduced rate of growth of the Brazilian economy led both to an increase in exports and to a slight decrease in imports in 1977. The need for external resources to compensate for the trade deficit was indeed very modest when compared to the value of the net capital loans contracted during the period. The expansion of the debt during this period was caused mainly by the financial cost of the debt.

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14 The trade deficit between 1974-76 was provoked both by the reduction of the value of the exports (caused by the world recession) and mainly by the increase of the value of the imports associated with the implementation of the II PND. Such an increase, in turn, was due both to a high import coefficient of the intermediate and capital goods necessary for the implementation of the II PND and to the rise in the price of those goods in the international market (Davidoff Cruz, 1984: 19).
(interest plus amortization) and the rise in international reserves (36% and 40% of the net capital loans contracted during the period, respectively) (Table 5.4).

The cause of this reversal in the composition of the debt is two-fold. On the one hand, it was a consequence of changes which occurred in the international financial system. After a phase of restriction of liquidity in the preceding period, the international banks significantly increased the volume of operations, extended the maturity of loans and reduced the spreads charged (ibid.: 22). On the other hand, and in accordance with the determination of the Brazilian government to sustain high levels of growth while maintaining the same pattern of financing (based on international financial capital), a set of policies intended to create the conditions to attract foreign currency was adopted. First, the policy of regularly devaluing the Cruzeiro at rates consistently below those of the domestic inflation was maintained (Table 5.5), thereby stimulating the utilization of the mechanisms for borrowing foreign currency (Law 4131 and Resolution 63) by both public and private firms (Table 5.6). Second, incentives such as the reduction of the minimum permitted maturity period for foreign loans and fiscal concessions over the payment of interest on external loans were given. Third, and perhaps more importantly, domestic interest rates were raised, so that borrowing abroad became still more attractive than borrowing at home.15

Therefore, to maintain high rates of growth, the government embraced a strategy which, instead of adapting the economy to the new international situation, tried to replicate the conditions which had sustained growth

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15 The rise in interest rates from 1974 was mainly determined by the increase in the discount rates of public bonds. For instance, the discount rates of a three-month maturity LTN (National Treasury Bill) rose from 14.4% in January 1974 to 18.5% in January 1975, 24.0% in January 1976 and 35.2% in January 1977.
during the preceding years. However, as a result of this strategy of deepening the dependence of growth on foreign funds, there was a significant elevation of the external debt and its servicing costs.

5.3.2 The Public Debt

Simultaneously, and as a consequence of the contour assumed by the counter-cyclical policies adopted in the second half of the 1970s, there was a profound deterioration in public finances. One of the major causes of this deterioration was the fiscal imbalance implied by that strategy. Whereas the increase in government expenditures (mainly through the operation of state-owned firms) assumed an important role in the implementation of the investments proposed by the II PND—especially those related to the expansion of the basic input and intermediate goods sectors (Table 5.7)—, there was no concurrent increase in government receipts. To finance the deficit so generated, the government had no alternative but to increase its debt. This destabilizing factor was indirectly compounded by the subsidized financing the government provided the private sector through the National Development Bank (BNDE) (Carneiro, 1991: 137).

Moreover, it must be noted that there was a trade-off between the measures taken to stimulate agents to borrow abroad and the objectives of the development plan; namely, to maintain domestic growth and to stabilize the balance of payments. This was so because although the restrictive monetary policy and the overvalued exchange rate constituted incentives to borrow abroad, they created significant difficulties for a segment of the

16 The public enterprises were not only used to implement the bulk of the investments proposed by the II PND; they were also used to attract the foreign resources necessary to finance such investments. Strict control of their prices and tariffs, reduced availability of public long-term funds to state-owned firms and restricted access to the internal credit market forced them to borrow abroad. As a consequence, the public sector became the major borrower of foreign resources (Table 5.8).
national entrepreneurs who could not cope with the rising financial costs of their debts and generated constraints for the private sector as a whole in achieving a trade surplus. To surpass such contradictions, and in accordance with its objectives, the government created mechanisms to subsidize the more fragile sectors (e.g. agriculture) and implemented incentives to exports and import substitution projects. To finance these incentives and subsidies the government had once again to augment its debt (ibid.: 141).¹⁷

The financial situation of the government was still further aggravated because of the protection it provided to the private financial sector in a situation of transition from a low to a high inflation regime. During the first years of the decade, when inflation was stabilized at low levels, part of the financial system borrowed from the public on a short-term basis and provided longer-term loans, both operations being effected in nominal terms. With the return of high rates of inflation there was a renewed demand for indexed contracts, which caused a rise in nominal interest rates. In this new situation, the banks were obliged to borrow at rates of interest higher than those attached to the loans agreed before the rise in inflation and which had not yet matured. As a consequence, part of the system was immersed in a situation of financial fragility which could turn into bankruptcy if it did not manage to reschedule the maturity timing of its past obligations. In this context, the government opted for acting as the lender of last resort, providing longer-term loans to threatened financial institutions and assuming the lender's risk (ibid.: 139).

It is important to emphasize the financial character of the

¹⁷ The subsidies (both direct and indirect) provided by the government grew in real terms 139.4% between 1973-76 and 84% between 1976-80. Moreover, whereas they represented 3% of the GDP and 31.9% of the tax revenue in 1973, in 1980 they represented 7.6% and 99.2% of the GDP and tax revenue, respectively (Belluzzo and Almeida, 1992a: 34).
imbalance in public finances created by that counter-cyclical strategy. As the policies employed combined the expansion of public expenditure with the implementation of a tight monetary policy as a form of turning the objectives of the plan compatible, the result had to be an increase in the financial dimension of the public debt. As Carneiro (ibid.: 145, translated by this author) puts it, "the growth of the public debt was the result of a particular mix of economic policy, in which the expansion of expenditure was financed by public debt at a high interest rate because of a specific strategy for adjusting the balance of payments". The imbalances so generated were progressively aggravated during the following years, causing the emergence of a situation of potential instability in public finances. Although in 1980 the amount paid by the government for interest was not relevant in absolute terms as yet, the growth of the public sector borrowing requirements between 1971-79 from 1.7% to 4.7% of GDP is an indicator of what was to come in the near future (Table 5.9).

5.3.3 The Resurgence of the High Inflation Regime

A most evident sequel of the rise in domestic interest rates provoked by the policy adopted by the government was the further acceleration of inflation. This happened because (i) the financial costs of the firms were increased and transmitted to prices and (ii) there was an increase in the uncertainty concerning the evolution of the real costs of short-term finance, which led to a speculative rise in mark-ups. For the government, however, there was no alternative. As external resources had to be attracted and the mounting public deficit had to be financed, interest rates had to be kept high. But besides accelerating inflation, the attachment of the government to its strategy of growth at any cost and the mechanisms employed to reach this objective also created the conditions for
preserving the unity of the functions of money even under higher and rising inflation rates. It is to this connection between the impositions of that strategy and the unplanned and reinforced resurgence of the institutions of the high inflation regime that one now turns.

A crucial element of that connection was the development of open market operations based on ORTNs. The open market was implemented in Brazil in 1969 and already in the early 1970s the first operations involving public bonds were effected. As public bonds offered real rates of interest associated with high levels of liquidity, they were bought by the banks as a safe and profitable application of their reserves. Such an arrangement interested both the banks and the government, for whereas the former would maintain their idle reserves in terms of an inflation-proof and liquid bond, the latter could finance itself in a non-inflationary way.

To stimulate these operations, however, it was still necessary to create the conditions for the banks to finance the purchase of the bonds. Mechanisms of "repurchasing" were introduced, according to which the seller of the bond was committed to buy it back at the end of a contractually-established period at a certain agreed price. Thus, a bank could buy public bonds of a certain maturity (e.g. one year) with the certainty that at the end of that period the government would repurchase them for their original price plus a contractually-established real interest rate. Simultaneously, to finance the purchase, the bank would sell the bonds in the overnight market – with the commitment to repurchase them on the following day – in order to pay the government.\footnote{Overnight operations are one-day transactions in which the seller of a bond is formally committed to purchase it back on the following day for a contractually established higher price. The difference between the price at which the bond is sold and that at which it is bought back is the indicator of the interest rate in the overnight market.} On the following day, in order to remunerate the buyers of the day before, the bank would sell the bonds once
again with the same commitment to repurchase them on the day after. This procedure was repeated day after day until the bond reached its maturity; by so doing, the bank would finance itself daily in the overnight market. On the last day of the process, the bank paid the buyers of the day before with the government's repayment at maturity. The difference between the interest rates offered by the government and the overnight interest rates provided the bank with a profit. Obviously, there was a potential risk for the bank associated with this process, for the former rate would not always be higher than the latter. The possibility of oscillation in interest rates acted as a limiting factor on the banks financing of the purchasing of public bonds with shorter-term operations.

However, from the very beginning of the operation of the open market in Brazil, the monetary authorities committed themselves to the suppression of the risks associated with the operations of repurchasing. This was done through the adoption of the following mechanisms: (i) the Central Bank would intervene in the market to maintain overnight interest rates at levels consistently inferior to the remuneration of the public bonds; (ii) if this were not possible, at any time, to maintain that rule, the Central Bank would buy the "old" bonds and sell the banks new ones with a rate of return compatible with the new level of overnight interest rates; (iii) if, for any reason, the banks were not able to finance a parcel of the bonds in the market on a particular day, the government would buy this parcel at the end of the day at the market price. In this context, there was almost no risk for the banks. For the banks' customers, in turn, this arrangement

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In the beginning of the operations of the open market, the financiers of the banks were mainly other banks with idle reserves; i.e. the banks, according to their needs and availability of reserves, exchanged with each other idle reserves for public bonds held in their portfolios. With the development of the institutional framework of the open market and the rise in inflation, other agents such as non-financial firms and small investors were also attracted to participate in open-market operations.
would allow them to invest their idle resources in highly liquid assets and receive a remuneration either equal to or higher than the variation of inflation (Mendonça de Barros, 1991: 10).

Thus, from 1974, when rising levels of inflation were leading agents to look for alternative forms of storing wealth, there was a significant development in open market operations based on ORTNs. And the higher the interest rates offered by the government the higher the attractiveness of those applications. It was in this context of rising inflation and diversification of alternatives that other financial institutions (e.g. brokers) and even non-financial firms began to participate in open market operations. Moreover, the entrance of these firms was further stimulated by the prospect of a deceleration of private investment in the productive sphere at that time. This led the most liquid non-financial firms to invest their resources in the financial circulation.

However, and in spite of its vigour, the repurchasing operations suffered from the practical difficulties involved in negotiating a great volume of resources over extremely short intervals. Although these operations were based on a safe and highly liquid bond – ORTN – there was always the practical problem of delivering both the bonds and the money to the agents involved in the operations, thus preventing them from being adopted in a massive way. In order to solve these difficulties, the government implemented, in 1979, a modern computer-based system for controlling the operations of buying and selling of public bonds. The system was called SELIC – Sistema Especial de Liquidação e Custódia (Special System for Settlement and Custody). Under the coordination of the Central Bank and Andima – Associação Nacional das Instituições do Mercado Aberto (Open-Market Institutions National Association) –, it was intended to create conditions of safety and functionality necessary to make open
market operations an even more popular form of financial investment. The
SELIC would transfer the property of both the bonds and money involved in
a specific transaction, register the rate at which the bonds should be
repurchased and, at the date previously ratified, undo the operation.
Besides being safer, this system no longer required the physical presence
of public bonds, which were transformed into mere book entries (Eduardo
Carvalho, 1986: 97).

Both the guarantees given by the government and, later, the
introduction of that innovation allowed the financial institutions to offer
their customers the opportunity to buy financial assets whose remuneration
was anchored to ORTN-based operations but which were more accessible for
those who could not part with the minimum amounts required for open market
operations. From 1977, for instance, the Certificates of Bank Deposits
began to be indexed to ORTNs. This was an important step both for the
practice of indexation to be spread throughout the economy in the following
years and for connecting even relatively small investors to the open
market. For similar reasons, indexed savings accounts became the more
popular instrument for those who, although not having access to open market
operations, were eagerly looking for protection against the devaluation of
their wealth by inflation. Thus, as a consequence of both the increase in
inflation and the development of open market operations, the store-of-value
function of money was progressively being performed by ORTN-based
applications. Although offering lower returns and being less liquid than
the ORTNs, those assets would protect the private agents against the
devaluation inflation provokes and could be easily converted into the legal
means of payment.

That role was still compounded by the mechanisms used by the
government to maintain the attractiveness of foreign funds in order to
finance the external debt. Besides creating a spread between domestic and international interest rates, the government maintained the policy of devaluing the Cruzeiro always below the variation of domestic inflation, such that there was a sustained incentive to contract debts in terms of an undervalued foreign currency.20 However, as the bulk of the stock of the external debt at that time was owned by the government and as the contracting of foreign funds was made mostly by either private or state-owned firms, the government had to purchase the foreign resources from those firms to meet its demands. By so doing, the government obtained the foreign resources it needed and offered those agents further protection against inflation. That was possible because both the private and the state-owned firms could contract debts in terms of foreign currency, exchange them for Cruzeiros, and apply the resources so obtained in ORTN-based operations. As the variation of the exchange rate was consistently below the variation of the ORTNs (which were corrected by the domestic inflation), it consisted of a non-risk operation for the firms involved. Yet it is obvious that all the costs of this institutional arrangement were absorbed by the government, which had to pay for the difference between the remuneration of the ORTNs and the variation of the exchange rate through the increase in its internal debt.

At the same time as indexed assets were progressively assuming the preferences of the agents as the most reliable form of storing value, monetary contracts at large were also being indexed to the variation in past inflation. Evidently, not all agents had equal power to index their contracts. In the authoritarian context of the 1970s, workers were certainly those who lost most to inflation acceleration. Nevertheless, and

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20 This incentive was still higher in the second half of the 1970s because of the rising world inflation in that period.
spite of those inequalities, over the second half of the 1970s those instruments (indexed assets and indexed contracts) and the rules which endorsed their use were gradually perceived by producers as institutions which created the necessary conditions to establish monetary contracts and therefore to put the productive circuit in motion even under high inflation. Moreover, producers became used to them and behaved, in contractual matters, in accordance with them. In this sense, those institutional and behavioural changes and their repeated enforcement by government actions engendered a culture of inflation, in which, despite high inflation, money was still regarded as a social institution. That is, because those arrangements allowed money to provide some of the basic conditions necessary to activate the productive sphere — and therefore to balance private interests and social needs — even under high inflation, they conserved money as an element of social cohesion.

However, the most distinctive aspect of the Brazilian high inflation regime was that in the centre of its institutional framework was the State. First, it was the government who defined the rules of indexation for most of the monetary contracts in the economy. Second, it was also the government who backed most of the assets which served as store of value (ORTNs and savings accounts, most noticeably) and who defined the terms and conditions at which they could be exchanged for the national currency. Third, it was the government who bore most of the costs involved in the maintenance of the stability of that regime. As a consequence, the element which unified the whole institutional framework on which the unity of the functions of money depended was confidence in the State as the guarantor of the stability of the institutions which allowed the establishment of contractual relations. Also, confidence in the capacity of the State to overcome the costs involved in preserving that stability.
Put another way, both the confidence in the correction of contractual values through indexation and trust in the ability of the ORTN-based financial instruments to conserve their value over time were founded on and confounded with trust in the State as a social operator.

5.4 The Unity of the Functions of Money Threatened

In spite of all the imbalances the counter-cyclical policy adopted by the government created, the way the system was settled allowed the interests of both the government and private firms to be made compatible. On the one hand, levels of production and investment were maintained reasonably high despite rising levels of inflation and the adverse international situation, thereby fulfilling the major objective of the government. On the other hand, producers were given instruments which greatly reduced the risks of reproducing their wealth through the productive sphere. Moreover, the functioning of the productive sphere even under high inflation contributed to the fact that even those who had not the power to use that institutional arrangement to protect themselves against inflation could aspire to social ascension. However, this situation could only continue if some basic conditions were observed. First, foreign resources should continue to be available at a reasonably low cost, so that the government could keep domestic firms interested in borrowing abroad without having to raise domestic interest rates to still higher levels. This would cause a further disarray in public finances. Second, it was necessary to maintain confidence in the stability of the institutional setting which gave producers the basic necessary conditions to protect and reproduce their wealth through the productive sphere even in an inflationary environment. However, as the costs of preserving that institutional apparatus was being borne mostly by the government, that
confidence depended heavily on the capacity of the government to finance its recurrent deficits without destabilising the institutions of the high inflation regime.

The second condition was first put at risk in 1976, when the government modified the rules of indexation for the ORTNs, thereby affecting the confidence in the indexation system of the economy. According to the government, plain indexation to past inflation was creating inflationary inertia, leading the agents to consider past inflation as a plateau for future inflation. Thus, instead of correcting the value of ORTNs by the variation of the index which measured past inflation (IGP), ORTNs would be corrected from then onwards by a mixed index composed of 80% of the variation of the IGP and 20% of the expected inflation for the current period, according to the government’s expectations. Through these modifications, the government was trying, in effect, to pass back to the private sector some of the costs of enforcing the high inflation regime. By so doing, however, the government jeopardized confidence in the correspondence between the nominal and the real values of ORTNs in an inflationary setting and had to retract (Mendonça de Barros, 1985: 41). In spite of the danger this alteration brought for the maintenance of the unity of the functions of money, it was only when the first of the above-mentioned two conditions was threatened that the institutions which maintained that unity lost their credibility.

In 1979, two international events provoked severe difficulties for the government to obtain foreign currency in the amount and on the terms required to finance the continuance of the growth. First there was the second oil shock and then the rise of international interest rates resulting from the abrupt change of American economic policy. Despite the sudden change in the environment, the government decided to maintain both
the strategy of stimulating growth and the same institutional framework which had been sustaining this strategy in past years. Differing from the preceding period, however, the economic policy would attempt to conciliate the maintenance of growth with the restoration of the public finances, in an implicit acknowledgment of the imbalances that the counter-cyclical policy had caused. To do that, the government established strict controls on interest rates, bringing them to a lower level. Simultaneously, however, the government had to increase still more the attraction of foreign currency. With this aim, in December 1979, the minister of finance decreed a "maxidevaluation" of the Cruzeiro by 30%.

The two main outcomes of this latter decision were: (i) huge losses for those who had contracted debts in terms of foreign currency and (ii) a big increase in domestic rates of inflation caused by the rise in the price of imported goods. Moreover, the abrupt rupture of the rule of the minidevaluations (which had been followed for 12 years) broke confidence in what could happen from that moment on in terms of the variation in the exchange rate. As a consequence, there was no longer interest from private firms in accepting debts in terms of foreign currency.

What followed thereafter was still worse. In an attempt to bring inflationary expectations down, the government decided to change once again the rules of indexation. Thus, in the beginning of 1980 the indices used to correct the values of the exchange rate and the ORTNs (and therefore the indexed contracts) had their values pre-defined at 40% and 45%, respectively, for the whole year. Despite the government's hopes, however,
inflation reached 110% at the end of that year. The most immediate consequence aroused from that situation was the creation of a still higher aversion to assuming debts in terms of foreign currency, for there was the fear of a new maxidevaluation to compensate for the artificial valuation of the national currency. Moreover, there was a deterioration in confidence in the institutional arrangements which had allowed the maintenance of the unity of the functions of money for more than a decade. On the one hand, the breakdown of the rules for correcting the nominal values of contracts left private agents with no reliable index for calculating the real value of nominal magnitudes through time, which is a crucial requirement to establish and discharge monetary contracts in inflationary environments. On the other hand, ORTN-based operations were no longer believed to be safe. In these circumstances, there were speculative moves, disorganization of markets and a conversion of financial assets into real assets or foreign currencies (especially the Dollar) which could lull the private agents' fear of losing their wealth. Thus, in the absence of reliable state institutions such as those operating before 1979, high inflation was eroding the capacity of money to perform its basic functions and was therefore prompting agents to look for alternative instruments, even if at the expense of the organization of the productive sphere.

Therefore, although the strategy of growth in the second half of the 1970s created the conditions for preserving the unity of the functions of money, maintaining the same strategy even after the changes in the international scenario and, at the same time, trying to move to fiscal balance, put those conditions at risk. Instead of strengthening the institutional framework of the high inflation regime, the measures taken (reduced domestic interest rates, maxidevaluation of the exchange rate, abrupt changes in the indexation system) weakened confidence in the
in a title framework which had maintained the unity of the functions of money over the preceding years.

Given the disruptive results of its policy, the government had no alternative but to retract. The assets which had been used as store of value over the previous decade (ORTNs, savings accounts, indexed time deposits, etc.) were again to be corrected by past inflation (according to the IGP variations) or, alternatively, as in the case of the ORTNs, according to the exchange rate variations. The exchange rate adjustments, in turn, would follow once again the previous pattern of small and frequent devaluations of the national currency. However, in contrast to the minidevaluation policy previously adopted, the exchange rate was now pegged to the variation of domestic inflation without discounting for external inflation (Barros, 1985: 41). This measure was intended to placate the fears of private agents, who, because of the uncertainties that the experience of deindexation introduced, would otherwise prefer to hold on to ORTNs indexed to exchange rate variations rather than to those indexed to IGP variations. Moreover, by equalising the exchange rate variation and the monetary correction variation, the government also instituted a new reliable index to be used to correct the values of monetary contracts, thereby creating the conditions for the restoration of confidence in the Cruzeiro as a standard of value. That was the beginning of a long series of adaptations through which the Brazilian high inflation regime passed in the 1980s, whereby the culture of inflation assumed a still more crucial role for the maintenance of the unity of the functions of money.
Table 5.1 Annual rates of change of GDP, per capita GDP and inflation (1957-80).

<table>
<thead>
<tr>
<th>Years</th>
<th>GDP</th>
<th>Per Capita GDP</th>
<th>GPI (DS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1957</td>
<td>7.7</td>
<td>4.5</td>
<td>6.9</td>
</tr>
<tr>
<td>1958</td>
<td>10.8</td>
<td>7.6</td>
<td>24.4</td>
</tr>
<tr>
<td>1959</td>
<td>9.8</td>
<td>6.6</td>
<td>39.4</td>
</tr>
<tr>
<td>1960</td>
<td>9.4</td>
<td>6.2</td>
<td>30.4</td>
</tr>
<tr>
<td>1961</td>
<td>8.6</td>
<td>5.6</td>
<td>47.7</td>
</tr>
<tr>
<td>1962</td>
<td>6.6</td>
<td>3.6</td>
<td>51.6</td>
</tr>
<tr>
<td>1963</td>
<td>0.6</td>
<td>-2.2</td>
<td>79.8</td>
</tr>
<tr>
<td>1964</td>
<td>3.4</td>
<td>0.5</td>
<td>92.1</td>
</tr>
<tr>
<td>1965</td>
<td>2.4</td>
<td>-0.5</td>
<td>34.2</td>
</tr>
<tr>
<td>1966</td>
<td>6.7</td>
<td>3.6</td>
<td>39.1</td>
</tr>
<tr>
<td>1967</td>
<td>4.2</td>
<td>1.3</td>
<td>25.0</td>
</tr>
<tr>
<td>1968</td>
<td>9.8</td>
<td>6.7</td>
<td>25.4</td>
</tr>
<tr>
<td>1969</td>
<td>9.5</td>
<td>6.4</td>
<td>19.3</td>
</tr>
<tr>
<td>1970</td>
<td>10.4</td>
<td>7.2</td>
<td>19.2</td>
</tr>
<tr>
<td>1971</td>
<td>11.3</td>
<td>8.6</td>
<td>19.4</td>
</tr>
<tr>
<td>1972</td>
<td>12.1</td>
<td>9.3</td>
<td>15.7</td>
</tr>
<tr>
<td>1973</td>
<td>14.0</td>
<td>11.2</td>
<td>15.5</td>
</tr>
<tr>
<td>1974</td>
<td>9.0</td>
<td>6.4</td>
<td>34.5</td>
</tr>
<tr>
<td>1975</td>
<td>5.2</td>
<td>2.7</td>
<td>29.4</td>
</tr>
<tr>
<td>1976</td>
<td>9.8</td>
<td>7.1</td>
<td>46.3</td>
</tr>
<tr>
<td>1977</td>
<td>4.6</td>
<td>2.1</td>
<td>38.8</td>
</tr>
<tr>
<td>1978</td>
<td>4.8</td>
<td>2.3</td>
<td>40.8</td>
</tr>
<tr>
<td>1979</td>
<td>7.2</td>
<td>4.6</td>
<td>77.2</td>
</tr>
<tr>
<td>1980</td>
<td>9.1</td>
<td>6.5</td>
<td>110.2</td>
</tr>
</tbody>
</table>


Notation:
GDP - Gross Domestic Product
GPI - General Price Index
DS - Domestic Supply
Table 5.2  Main financial assets as a percentage of the total (1966-1980)

<table>
<thead>
<tr>
<th>Years</th>
<th>MI</th>
<th>government bonds/bills</th>
<th>savings deposits (indexed)</th>
<th>time deposits indexed</th>
<th>nonindexed</th>
<th>bills of exchange</th>
<th>mortgage bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966</td>
<td>79.4</td>
<td>10.6</td>
<td>0.1</td>
<td>2.4</td>
<td>n.a</td>
<td>6.9</td>
<td>0.4</td>
</tr>
<tr>
<td>1967</td>
<td>73.0</td>
<td>11.8</td>
<td>-</td>
<td>0.4</td>
<td>3.3</td>
<td>n.a</td>
<td>10.0</td>
</tr>
<tr>
<td>1968</td>
<td>67.0</td>
<td>11.0</td>
<td>-</td>
<td>1.0</td>
<td>4.5</td>
<td>n.a</td>
<td>14.3</td>
</tr>
<tr>
<td>1969</td>
<td>63.5</td>
<td>13.2</td>
<td>-</td>
<td>2.0</td>
<td>4.3</td>
<td>0.4</td>
<td>13.8</td>
</tr>
<tr>
<td>1970</td>
<td>55.5</td>
<td>14.7</td>
<td>0.1</td>
<td>3.3</td>
<td>6.7</td>
<td>0.2</td>
<td>15.2</td>
</tr>
<tr>
<td>1971</td>
<td>49.8</td>
<td>12.5</td>
<td>4.2</td>
<td>4.1</td>
<td>10.0</td>
<td>0.1</td>
<td>15.6</td>
</tr>
<tr>
<td>1972</td>
<td>44.9</td>
<td>11.2</td>
<td>7.1</td>
<td>5.4</td>
<td>11.8</td>
<td>0.1</td>
<td>15.7</td>
</tr>
<tr>
<td>1973</td>
<td>43.6</td>
<td>9.7</td>
<td>8.0</td>
<td>6.5</td>
<td>11.9</td>
<td>0.1</td>
<td>17.0</td>
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<tr>
<td>1974</td>
<td>43.2</td>
<td>11.4</td>
<td>5.0</td>
<td>9.9</td>
<td>11.5</td>
<td>0.0</td>
<td>16.0</td>
</tr>
<tr>
<td>1975</td>
<td>39.3</td>
<td>13.2</td>
<td>8.2</td>
<td>12.1</td>
<td>11.9</td>
<td>0.0</td>
<td>13.3</td>
</tr>
<tr>
<td>1976</td>
<td>36.3</td>
<td>12.3</td>
<td>10.1</td>
<td>15.7</td>
<td>10.6</td>
<td>0.0</td>
<td>10.0</td>
</tr>
<tr>
<td>1977</td>
<td>33.5</td>
<td>11.7</td>
<td>11.9</td>
<td>17.4</td>
<td>13.0</td>
<td>0.1</td>
<td>8.4</td>
</tr>
<tr>
<td>1978</td>
<td>31.3</td>
<td>10.6</td>
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<td>0.1</td>
<td>8.7</td>
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<tr>
<td>1979</td>
<td>33.2</td>
<td>10.0</td>
<td>10.7</td>
<td>20.5</td>
<td>14.0</td>
<td>0.0</td>
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<td>1980</td>
<td>33.4</td>
<td>13.8</td>
<td>6.0</td>
<td>22.8</td>
<td>13.7</td>
<td>0.0</td>
<td>6.4</td>
</tr>
</tbody>
</table>

Source: Banco Central do Brasil, Annual Report, several issues.

1. The data for 1966-68 refer to indexed and nonindexed time deposits.
Table 5.3 Annual average rates of growth of real product per sector in manufacturing industry (1970-80).

<table>
<thead>
<tr>
<th>Years</th>
<th>Capital</th>
<th>Intermediate</th>
<th>Consumer</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Durable</td>
<td>Nondurable</td>
</tr>
<tr>
<td>1970/73</td>
<td>22.7</td>
<td>13.2</td>
<td>25.5</td>
</tr>
<tr>
<td>1974/76</td>
<td>13.0</td>
<td>8.7</td>
<td>10.3</td>
</tr>
<tr>
<td>1977/80</td>
<td>3.4</td>
<td>8.0</td>
<td>8.6</td>
</tr>
<tr>
<td>1974/80</td>
<td>7.4</td>
<td>8.3</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Source: Serra (1982)
Table 5.4 Selected indicators of the external sector (1969-80) - US$ billion

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Debt</td>
<td>4.4</td>
<td>5.3</td>
<td>6.6</td>
<td>9.5</td>
<td>12.6</td>
<td>17.2</td>
<td>21.2</td>
<td>26.0</td>
<td>32.0</td>
<td>43.5</td>
<td>49.9</td>
<td>53.9</td>
</tr>
<tr>
<td>Reserves</td>
<td>0.7</td>
<td>1.2</td>
<td>1.7</td>
<td>4.2</td>
<td>6.4</td>
<td>5.3</td>
<td>4.0</td>
<td>6.6</td>
<td>7.3</td>
<td>11.9</td>
<td>9.7</td>
<td>6.9</td>
</tr>
<tr>
<td>Trade Balance</td>
<td>0.3</td>
<td>0.2</td>
<td>-0.3</td>
<td>-0.2</td>
<td>0.0</td>
<td>-4.7</td>
<td>-3.5</td>
<td>-2.3</td>
<td>0.1</td>
<td>-1.0</td>
<td>-2.8</td>
<td>-2.9</td>
</tr>
<tr>
<td>Exports</td>
<td>2.3</td>
<td>2.7</td>
<td>2.9</td>
<td>4.0</td>
<td>6.2</td>
<td>8.0</td>
<td>8.7</td>
<td>10.1</td>
<td>12.1</td>
<td>12.7</td>
<td>15.2</td>
<td>20.1</td>
</tr>
<tr>
<td>Imports</td>
<td>2.0</td>
<td>2.5</td>
<td>3.2</td>
<td>4.2</td>
<td>6.2</td>
<td>12.7</td>
<td>12.2</td>
<td>12.4</td>
<td>12.0</td>
<td>13.7</td>
<td>18.0</td>
<td>23.0</td>
</tr>
<tr>
<td>Interest</td>
<td>-0.2</td>
<td>-0.2</td>
<td>-0.3</td>
<td>-0.4</td>
<td>-0.5</td>
<td>-0.7</td>
<td>-1.5</td>
<td>-1.8</td>
<td>-2.1</td>
<td>-2.7</td>
<td>-4.2</td>
<td>-6.3</td>
</tr>
<tr>
<td>Amortization</td>
<td>-0.5</td>
<td>-0.7</td>
<td>-0.8</td>
<td>-1.2</td>
<td>-1.6</td>
<td>-1.9</td>
<td>-2.1</td>
<td>-2.8</td>
<td>-4.0</td>
<td>-5.3</td>
<td>-6.3</td>
<td>-5.0</td>
</tr>
<tr>
<td>Net Capital Loans</td>
<td>0.9</td>
<td>0.8</td>
<td>1.9</td>
<td>3.9</td>
<td>4.5</td>
<td>6.5</td>
<td>5.5</td>
<td>8.7</td>
<td>4.7</td>
<td>10.4</td>
<td>6.8</td>
<td>8.9</td>
</tr>
</tbody>
</table>

Table 5.5 Annual rates of growth of inflation and exchange rate (1971-80).

<table>
<thead>
<tr>
<th>Year</th>
<th>IGP (DS)</th>
<th>Exchange Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>19.4</td>
<td>13.8</td>
</tr>
<tr>
<td>1972</td>
<td>15.7</td>
<td>10.3</td>
</tr>
<tr>
<td>1973</td>
<td>15.5</td>
<td>0.1</td>
</tr>
<tr>
<td>1974</td>
<td>34.5</td>
<td>19.5</td>
</tr>
<tr>
<td>1975</td>
<td>29.4</td>
<td>22.0</td>
</tr>
<tr>
<td>1976</td>
<td>46.3</td>
<td>36.1</td>
</tr>
<tr>
<td>1977</td>
<td>38.8</td>
<td>30.0</td>
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<tr>
<td>1978</td>
<td>40.8</td>
<td>30.3</td>
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<tr>
<td>1979</td>
<td>77.2</td>
<td>103.3</td>
</tr>
<tr>
<td>1980</td>
<td>110.2</td>
<td>54.0</td>
</tr>
</tbody>
</table>

Source: IBGE (1987) and Conjuntura Econômica (several issues).

Table 5.6 Loans contracted via Law 4131 and Resolution 63 (1972-1980).

<table>
<thead>
<tr>
<th>Year</th>
<th>Law 4131</th>
<th>Res 63</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US$ bi</td>
<td>%</td>
<td>US$ bi</td>
</tr>
<tr>
<td>1972</td>
<td>2.50</td>
<td>63.0</td>
<td>1.46</td>
</tr>
<tr>
<td>1973</td>
<td>2.85</td>
<td>72.7</td>
<td>1.07</td>
</tr>
<tr>
<td>1974</td>
<td>3.11</td>
<td>65.9</td>
<td>1.61</td>
</tr>
<tr>
<td>1975</td>
<td>3.77</td>
<td>80.3</td>
<td>0.93</td>
</tr>
<tr>
<td>1976</td>
<td>3.83</td>
<td>70.9</td>
<td>1.57</td>
</tr>
<tr>
<td>1977</td>
<td>4.88</td>
<td>78.6</td>
<td>1.32</td>
</tr>
<tr>
<td>1978</td>
<td>8.83</td>
<td>74.3</td>
<td>3.05</td>
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<tr>
<td>1979</td>
<td>8.85</td>
<td>84.6</td>
<td>1.57</td>
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<td>1980</td>
<td>4.81</td>
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</tr>
<tr>
<td>1981</td>
<td>7.60</td>
<td>58.2</td>
<td>5.47</td>
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<table>
<thead>
<tr>
<th>Year</th>
<th>Private</th>
<th>Government</th>
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</thead>
<tbody>
<tr>
<td>1971</td>
<td>42.5</td>
<td>57.5</td>
</tr>
<tr>
<td>1972</td>
<td>43.5</td>
<td>56.5</td>
</tr>
<tr>
<td>1973</td>
<td>38.3</td>
<td>61.7</td>
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<tr>
<td>1974</td>
<td>39.0</td>
<td>61.0</td>
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<td>55.4</td>
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<td>1978</td>
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<td>60.5</td>
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<td>1979</td>
<td>32.1</td>
<td>67.9</td>
</tr>
<tr>
<td>1980</td>
<td>35.4</td>
<td>64.6</td>
</tr>
</tbody>
</table>

Source: IBGE (1987)
Table 5.8 Medium to long term foreign debt (1973-80).

<table>
<thead>
<tr>
<th>Years</th>
<th>Total (US$ bi)</th>
<th>Public Debt</th>
<th>Private Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(US$ bi)</td>
<td>(US$ bi) (%)</td>
<td>(US$ bi) (%)</td>
</tr>
<tr>
<td>1973</td>
<td>12.5</td>
<td>6.5</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>52.0</td>
<td>48.0</td>
</tr>
<tr>
<td>1974</td>
<td>17.1</td>
<td>8.5</td>
<td>8.6</td>
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<td></td>
<td></td>
<td>49.7</td>
<td>50.3</td>
</tr>
<tr>
<td>1975</td>
<td>21.1</td>
<td>11.4</td>
<td>9.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>54.0</td>
<td>46.0</td>
</tr>
<tr>
<td>1976</td>
<td>25.9</td>
<td>14.8</td>
<td>11.1</td>
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<td></td>
<td></td>
<td>57.1</td>
<td>42.9</td>
</tr>
<tr>
<td>1977</td>
<td>32.0</td>
<td>19.3</td>
<td>12.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60.3</td>
<td>39.7</td>
</tr>
<tr>
<td>1978</td>
<td>43.5</td>
<td>27.5</td>
<td>16.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>63.2</td>
<td>36.8</td>
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<tr>
<td>1979</td>
<td>49.9</td>
<td>34.0</td>
<td>15.9</td>
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<tr>
<td></td>
<td></td>
<td>68.1</td>
<td>31.9</td>
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<tr>
<td>1980</td>
<td>53.8</td>
<td>37.3</td>
<td>16.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>69.3</td>
<td>30.7</td>
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</table>

Source: Banco Central do Brasil, Monthly Bulletin, several issues.
Table 5.9 Public sector borrowing requirements (PSBR) and government debt service as a percentage of GDP (1971-80).

<table>
<thead>
<tr>
<th>Years</th>
<th>PSBR</th>
<th>Government Debt Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>1971</td>
<td>1.74</td>
<td>0.23</td>
</tr>
<tr>
<td>1972</td>
<td>5.86</td>
<td>0.14</td>
</tr>
<tr>
<td>1973</td>
<td>3.68</td>
<td>0.64</td>
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<tr>
<td>1974</td>
<td>1.96</td>
<td>1.21</td>
</tr>
<tr>
<td>1975</td>
<td>2.39</td>
<td>0.76</td>
</tr>
<tr>
<td>1976</td>
<td>3.12</td>
<td>1.08</td>
</tr>
<tr>
<td>1977</td>
<td>5.08</td>
<td>1.04</td>
</tr>
<tr>
<td>1978</td>
<td>4.56</td>
<td>1.56</td>
</tr>
<tr>
<td>1979</td>
<td>4.72</td>
<td>1.87</td>
</tr>
<tr>
<td>1980</td>
<td>4.08</td>
<td>2.31</td>
</tr>
</tbody>
</table>

Source: Banco Central do Brasil, Monthly Bulletin, several issues; Conjuntura Econômica, several issues.
CHAPTER 6. THE ADAPTATION OF THE HIGH INFLATION REGIME IN THE 1980s

6.1 Introduction

The major feature of the 1980s in Brazil was the acceleration of inflation, such a trend being only briefly interrupted by three short-lived stabilization plans (Table 6.1). However, there was no collapse of the contractual relations of the economy during that period. Both the institutional apparatus created in the preceding fifteen years and the behaviour of producers proved to be flexible enough to adapt several times to the rising inflation and to its maintenance at higher levels. As a result, producers could keep their liquid wealth in terms of financial assets which were believed to be convertible into the legal means of payment (the national currency) at stable terms. Moreover, the monetary value of most of the contracts was periodically corrected by an index whose relation of representativeness to the national currency was also believed to be stable over time. In other words, the institutional and behavioural adaptation of the economy allowed the maintenance of the unity of the functions of money — and, therefore, the maintenance of the basic conditions necessary to establish contracts — in spite of the acceleration of inflation. This adaptation, however, was neither a pacific nor a planned process. Instead, it was the outcome of the independent and sometimes contradictory responses of both the private agents and the government to the new situation which emerged in the aftermath of the crisis of the balance of payments in the late 1970s, and which had dismantled the financing framework of the economy. Accordingly, it is only in the context of those responses that the maintenance of money as a social institution

---

1 The three plans were the Cruzado Plan (February 1986), the Bresser Plan (June 1987) and the Summer Plan (January 1989). They will be discussed in detail in chapter 7.
in Brazil during the 1980s can be properly understood.

Thus, the first issue to be discussed in this chapter is the setting in which those responses evolved (section 6.2). The one event which moulded the institutional background for the whole decade was the adjustment policy implement by the government in the early 1980s. As the policy-makers considered that the economy would reestablish its growth path as soon as the crisis of the external accounts had been solved, they adopted as their main goal the restoration of the equilibrium of the balance of payments. In accordance with that diagnosis, between 1981-84 economic policy was manipulated to create conditions for generating large trade surpluses, so that the existing external constraints could be surpassed. However, given the contraction of the levels of world trading – provoked by the world recession and by the ensuing protectionist measures adopted by the developed countries – there was almost no room for increasing Brazilian exports. The adjustment, then, would have to come mainly from the imports side. To reduce the level of imports, the government adopted a tight monetary policy. Besides diminishing aggregate demand, the maintenance of domestic interest rates at consistently high levels would ideally attract foreign capital and encourage private agents to borrow more abroad, thereby increasing the inflow of external funds. The responses of both producers and the government to that new situation will be given in detail below (sections 6.3 and 6.4). It will be shown that whereas producers successfully adapted their behaviour to the recessive picture, the government deliberately absorbed the costs and contradictions of its own strategy. This caused the public deficit to increase.

Finally, the theoretical framework developed in chapter 4 will be used to show how that strategy both induced behavioural changes and developed institutional mechanisms which restored confidence in the
stability of the high inflation regime, thus consolidating the culture of inflation and preserving the unity of the functions of money for most of the decade (section 6.5). It will be shown that, despite inflation acceleration, the most fundamental of the necessary (although not sufficient) conditions for making the generation of private and social wealth compatible processes was preserved.

6.2 The Adjustment to the Financing Crisis

The adjustment of the Brazilian economy to the new international situation was aimed at generating trade surpluses large enough to compensate for the then limited availability of external financing. With the resources so generated it would be possible to offset the deficits of the balance of payments and, according to the evaluations of the policy-makers, to attenuate the restrictions imposed by the foreign banks on new loans. Thus, the content of the adjustment policy was determined from the point of view of the external creditors, which identified the balance of payments deficits as caused by an "excessive" demand for foreign money (Belluzzo, 1984: 101). Such a diagnosis implied that (i) the overall level of domestic expenditure should be reduced (especially public expenditure, for the government was the major debtor) and (ii) more of the domestic output should be exported. The adjustment of the external sector would have to be made at the expense of the internal absorption of domestic output. Yet, in spite of the overtly contractionary orientation of the programme, the policy-makers advocated that the adjustment would promote, in the medium term, the growth of the economy. That is, although the adjustment of foreign trade would require, in the short term, the compression of GDP, the expansion of exports would itself lead to the expansion of the internal market (Delfim Netto, 1984: 47).
Among the measures taken to reduce the finance needs of the
government there were expenditure cuts at all levels and an increase in
taxes.\(^2\) Moreover, a tight monetary policy was adopted and controls of
credit mechanisms instituted, so that the availability of credit for both
the public and private sectors was reduced. Finally, with the objective of
reducing the general level of demand, the new wage policy implemented only
partial indexation. However, the core of the adjustment policy was a set
of measures employed to modify the structure of relative prices between
tradable and non-tradable goods, so that the producers would convert the
application of their resources from the production of non-tradable goods
to the production of tradable ones. Through this transformation of the
productive structure, in which the import coefficient is decreased and the
export coefficient is increased, the endeavour of consistently attaining
large trade surpluses was expected to succeed (Carneiro, 1991: 42).

The main instrument utilized to achieve this objective was the
exchange rate, which from then onwards was governed by a minidevaluation
policy pegged to the variation of the domestic inflation without
discounting for external inflation.\(^3\) Through this policy, the prices of
tradable goods would be increased in terms of the domestic currency,
thereby decreasing their internal absorption. Moreover, as the prices of
non-tradable goods would be reduced in terms of the foreign currency, some
of them could be made competitive in the international markets and
therefore transformed into tradable goods. Accordingly, several productive
sectors would be progressively connected to the external market, making

\(^2\) For a detailed description of these measures, see Carneiro and
Modiano (1990: 325-6).

\(^3\) Thus, it differed from the minidevaluation policy adopted for most
of the preceding decade, which was pegged to the variation of internal
inflation after discounting for external inflation.
exports a key variable for domestic growth. Besides the exchange rate policy, direct public investment in export-related activities (e.g. infrastructure and strategic inputs) and special financing mechanisms for export projects provided by the National Development Bank (BNDE) gradually substituted the subsidies and reduction in taxes previously employed to stimulate exports (ibid.: 43-4).

The more immediate outcome of the adjustment programme was a severe recession which lasted three years. As to the explicit objectives of the economic policy of the period, there are no doubts that it was capable of generating large trade surpluses over the following years (Table 6.2). Nevertheless, what is also without doubt is the failure of the adjustment programme to implement an export-led growth model for the Brazilian economy after the recession, as had been claimed by the government. Instead, as Carneiro (ibid.: 49) demonstrates, one observes over the decade a trade-off between the generation of large trade surpluses and a sustained growth of investment, which is provoked, on the one hand, by restrictions in the capacity to import and, on the other hand, by the impossibility of sustaining a simultaneous increase both in exports and in internal absorption. Moreover, and despite all efforts made to solve the problems of the balance of payments through the generation of large trade surpluses, the awaited renewed flow of voluntary loans did not come. In fact, the external financing crisis only increased over the decade, thereby provoking a further deterioration of the Brazilian external accounts (Table 6.2). These results can be better understood through an analysis of the evolution of the external debt during the 1980s, to which one now turns.

Between 1979–82 the Brazilian external accounts suffered double pressure. On the one hand, there was the aggravation of the trade deficits, which was triggered by the second oil shock and deepened by the world
recession. On the other hand, there was the rise in international interest rates, which was a consequence of the defensive monetary policy adopted by the United States to protect themselves against the effects of the international crisis. This strategy was subsequently followed by other developed countries. As a result of that change, the interest scheduled to be paid during that period constituted the principal component of the deficit in current transactions (Table 6.2). Although these imbalances were partly financed by the voluntary capital market, the newly contracted loans were insufficient even to pay for the servicing of the debt, thereby obliging the use of foreign currency reserves. Accordingly, between 1979–82 the liquid external debt grew more than the gross external debt (ibid.: 114) (Table 6.3).

The situation further deteriorated in 1982, when tensions accumulated during the previous three years in the world economy provoked the rupture of the voluntary capital market. Deprived of almost any voluntary loan to

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4 As the trade surpluses only began to be generated from 1981, there was a trade deficit for the period as a whole (1979–82).

5 The term voluntary loans refers to those loans negotiated directly between a government or financial institution and another country. In contrast, the term compulsory loans refers to those loans mediated by a multilateral organization (e.g. IMF), which normally has the power to decide the conditions under which members will borrow from each other.

6 The voluntary loans contracted during this period were conditioned on the commitment by the Brazilian government to promote the generation of trade surpluses. Moreover, most of these new loans were short-term loans, which caused a sharp deterioration of the profile of the external debt. For a detailed discussion of this point, see Batista Jr. (1988).

7 As the heavily indebted countries were forced to internalize a great deal of the international imbalances (e.g. via the increase of the financial component of their deficits provoked by the rise in the international interest rates), their external accounts deteriorated, thereby threatening their capacity to pay. Consequently, there was an elevation of the risks associated with new loans to these countries. Moreover, the assets of the lender banks in the third-world countries were progressively becoming an important parcel of the total capital of these institutions, thereby increasing their exposure to heavily indebted debtors. As a response to this increasingly aggravating situation, the
finance its deficit in current transactions, the Brazilian government had
to negotiate an adjustment program with the IMF at the end of that year to
avoid a collapse in its external accounts. However, given the restrictive
conditions imposed by the international financial community, a very limited
amount of compulsory loans was provided as a result of the agreement with
the IMF. In this context, almost the entirety of the deficit in current
transactions, which possessed an important financial component, had to be
financed through the generation of large trade surpluses in the years to come. The pressures for generating these trade surpluses ended up forcing
the government to decree a maxidevaluation of 30% of the Cruzeiro against
the Dollar in February 1983, thereby repeating a strategy already adopted
in 1979. Thus, the major consequence of the arrangement with the IMF
(forged in the context of the strategy followed by the government), besides
deepening the recession, was a continuous transfer of resources abroad
during the rest of the decade (Table 6.2).

The characteristics of this process of transfer can be pictured in
three different periods as follows. Between 1983-84, the transfer of real
resources exceeded the transfer of financial resources, thereby allowing
the accumulation of reserves. This result was made possible both because
of the flux of compulsory loans accorded in the ambit of the agreement with
the IMF, which financed part of interest due, and because of the generation
of large trade surpluses, especially in 1984. Between 1985-86, in turn, the
banks gradually reduced the flow of financial resources to the indebted
countries. Although that retraction had begun with the insolvency of Poland
in 1980-81, the decisive event was the Mexican moratorium in August 1982.
Given its magnitude, that event generated a crisis of confidence in the
capacity of payment of the indebted countries and prompted an abrupt
reduction (if not paralysis) of new voluntary loans for all the indebted

For a detailed discussion of the agreement with the IMF and for an
analysis of its evolution during the ensuing years, see Cavalcanti (1988:
41-8) and Carneiro and Modiano (1990: 328-42).
transfer of financial resources surpassed the transfer of real resources, which indicates a loss of reserves. This outcome is explained by the fact that, as opposed to the preceding period, there was a severe reduction in external compulsory financings and a sharp decrease in the trade surplus.\(^9\)

Finally, from 1987 onwards the transfer of real resources once again exceeded the transfer of financial resources, but this time only by a small amount, so that only a small increase in reserves was achieved in the period (ibid.: 122-3).\(^10\)

Thus, despite some oscillations, between 1983-89 the generation of large trade surpluses created the conditions for maintaining a balanced current transactions account. In this way, the strategy adopted by the government created the means for surpassing the financing crisis that emerged in the late 1970s. However, as any attempt to combine the generation of large trade surpluses with internal growth (without any relevant new loans being provided by the international financial market) reduced reserves, it became clear that the adjustment programme could only be carried out if domestic growth were sacrificed. Thus, the passive "adjustment" of the Brazilian economy to the new international situation implied giving up or at least drastically limiting the growth of the

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\(^9\) In 1985 and specially in 1986 there was a recovery in the domestic economy, initially stimulated by the internal impact of the export activities and subsequently (1986) by the temporary stabilization of the economy. However, given the trade-off between the generation of large trade surpluses and the growth of the domestic economy alluded to above, this recovery entailed an almost simultaneous fall in the trade surplus.

\(^10\) The dimension of the transfer of resources carried out during the 1980s can be better apprehended when one compares it with the absorption of resources that occurred in the preceding decade. Whereas the annual average absorption during the 1970s was 2.1% of GDP, more than 5% of GDP were transferred both in 1984 and in 1985; i.e. more than two and a half times the annual average value absorbed during the period of accelerated indebtedness was being transferred abroad to pay only the service of the debt (Cavalcanti, 1988: 33).
domestic economy.\textsuperscript{11}

6.3 The Adjustment of the Private Sector

As discussed in the preceding chapter, the emergence of contradictions in the domestic growth model plus the crisis in external sector in 1979 destabilized the Brazilian economy and eroded the confidence of producers in the maintenance of the accelerated growth of the preceding years. The more visible signs of that adverse situation were (i) the financial imbalances of the government, for the preceding growth had been largely dependent on the capacity of the State to articulate distinct interests, either investing in strategic sectors or financing and subsidising private firms; (ii) the difficulties for private agents borrowing at terms compatible with their expected capacity to pay. These difficulties reflected not only the high interest rates prevailing in the international capital market, but also their great volatility, which increased the risk of losses. Moreover, this risk was still further amplified by the ever-present fear of a new maxidevaluation of the Cruzeiro. In such a hostile and unstable environment, the costs and risks of contracting new debts and implementing new investments were high enough to discourage any significant project.

The risk of abrupt variation in interest rates and/or the exchange rates, however, also related to the stock of the external debt. Therefore, as the producers had assumed a huge stock of debts in terms of foreign currency during the period of economic growth - most of which were contracted under a floating interest rate clause -, the rational reaction

\textsuperscript{11} This trade-off reached its limits at the beginning of 1987. After a year of rapid domestic growth, reserves decreased from US$ 7 billion in February 1986 to US$ 3.3 billion in February 1987. As a consequence, a moratorium had to be adopted as a way of restoring the level of reserves to the bearable minimum.
was not only avoidance of new debt contracts but also to cancel the stock of debt contracted in terms of foreign currency. Thus, whereas from a macroeconomic perspective Brazil needed to attract more foreign currency to offset the imbalances of its external accounts, the rational decision to be followed by the indebted agents pointed in the opposite direction (Belluzzo and Almeida, 1992a: 37).

To undertake such a strategy, however, those agents needed to generate funds at a volume and timing compatible with scheduled commitments. Due to the deceleration of the economy, however, not all of the indebted agents were able to do so in the ensuing years. The smaller firms, for instance, did not succeed in transforming their liability structure, thereby incurring heavy losses over the decade (Almeida, 1988a: 13). The large private corporations (both national and foreign) were better adjusted to the new situation; in fact, in 1984, after the recessionary adjustment promoted by the government, these large private firms had already succeeded in restructuring their balance sheets (Table 6.4). Not only had they paid off most of their debts; they had generated liquid balances in a large enough volume to make them the biggest creditors in the economy.

The basis for this metamorphosis can be found in events of 1980. Although the maxidevaluation of the Cruzeiro at the end of 1979 had revalued indexed debts, the prefixation of both the exchange rate and the monetary corrections for 1980 at levels (40% and 45%, respectively) well below the actual inflation observed for that year (110%), caused the devaluation of those same debts. The net result was an average devaluation of 15% for the debts indexed either to the exchange rate or to the monetary corrections (Almeida, 1988b: 17n). The liquidity so generated was conveyed to the formation of speculative stocks, given the low price of imported goods.
inputs (a consequence of the then undervalued exchange rate), the relatively low domestic interest rates and the non-availability of alternative financial applications indexed to inflation in 1980. Thus, in 1981, when both the exchange rate and monetary corrections were once again fully indexed to the variation of inflation and the recessionary strategy was adopted, the large private corporations were liquid, with high levels of stocks and with their debts devaluated. With this new profile they were able to complete their restructuring during the recession years and beyond (ibid.: 17).\(^\text{12}\)

Between 1981-85, acting according to the recessionary signs given by the government, entrepreneurs reduced the levels of production and cut investment. If, on the one hand, the recession depressed the expected profits associated with productive activities, on the other hand it also reduced the demand for working capital and alleviated the need to contract new financings. Moreover, the stocks accumulated in 1980 allowed producers to diminish production costs and to negotiate better credit conditions to finance their activities. The most liquid firms could even opt for not assuming new debts at all, thereby escaping from high interest rates. More favourable conditions for firms in negotiating wages and input prices were also found, as workers' and input-suppliers' bargaining power was weakened

\(^{12}\) Two of the major institutionalized mechanisms utilized by the private firms to pass their debts on were Circular 230 and Resolution 432. These mechanisms had been instituted in 1977 by the government with the intention of attracting foreign currency. According to them, private agents could borrow foreign currency (respectively through Resolution 63 or Law 4131) and make a deposit in Dollars to the value of the loan with the Central Bank. Although the borrowers maintained the power of command over the resources whenever they wished, all the risks associated with devaluations of the exchange rate and all the financial costs of the debt were assumed by the government (Almeida, 1988b: 14). In this way, the agents could contract new short-term debts to pay off their old longer-term commitments and become free of all the risks of possessing liabilities indexed to a very unstable exchange rate. Those two mechanisms engendered what became known as the "statization" of the foreign debt, which will be discussed in the next section.
by the recession. Finally, other responses from the larger private corporations to the new situation were a sharp increase of their mark-ups, managerial rationalization and general reduction in costs (ibid.: 32-3) (Tables 6.5 and 6.6).\(^{13}\)

All these processes and situations allowed most of the large private firms to generate liquid funds in a volume and rhythm more than appropriate to cancel their current commitments associated with past debts. In this context, and stimulated by the then prevailing high interest rates and the existence of repurchasing clauses in open market operations, private agents abandoned their defensive behaviour and began to participate actively and vigorously in the financial market. As a consequence, nearly all of the disposable liquid funds were allocated to highly liquid short-term financial assets. In other words, the response of the large private firms to the recession consisted of progressively reducing their long-term endebtment and simultaneously assuming liquid positions in other agents' short-term liabilities (Table 6.7).

These changes in the composition of the balance sheets of large firms had a great effect on their performance. Whereas between 1979-81 their profitability was low (with the exception of 1980, as a consequence of the devaluation of their liabilities), from 1982 onwards profit rates begin to grow, reaching higher levels in 1985 than those observed in the years before the crisis (Table 6.5). Both the rise in mark-ups and the avoidance of new loans help to explain part of this inversion. However, it is not

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\(^{13}\) It must be noted that the firms associated with export activities constituted the more privileged sector of the economy during the adjustment programme. As the economic policy was chiefly oriented to creating the conditions necessary for the generation of operational profits in export-oriented activities, exporters benefited from the reduction of primary costs provoked by recession without having to face its adverse consequences. Not surprisingly, the most flexible firms which produced for the domestic market gradually moved their activities towards the external market.
enough to justify the magnitude that the process achieved (Almeida, 1988a: 97). In fact, it was the conversion of the large corporations from debtors to creditors in the financial system that engendered the bulk of the income flow necessary to increase their profit rates. Through this conversion, the increase in profits based on interest received from short-term financial applications more than compensated for the decline in profits based on productive activities, which had been badly affected by the recession. Only this process can account for the fall in financial obligations (mainly interest payments) from 6.5% of gross income in 1981 to virtually nothing in 1985. Such a result is all the more impressive if one considers the general conditions in which it was achieved (recession, high interest rates, exchange rate instability), all of which were adverse to the reduction of financial commitments (ibid.: 104). Thus, the profits of the large private corporations were progressively assuming a financial character, and as such were dependent on the maintenance of the institutional framework and the policy orientation then prevailing.

Beyond the recessionary adjustment, and for the rest of the decade, the private large firms continued accumulating liquid funds. That liquidity was the outcome of the very high profit margins those firms achieved from 1986 onwards (after decelerating between 1984–85), which was chiefly caused by the sharp rise in their mark-ups (Table 6.5) and by the high return from their indexed financial applications (especially operations based on government bonds). Although part of those liquid funds was utilized to further reduce their already decreased debts, the bulk of the acquired liquidity was turned either to very short-term indexed financial applications or to the diversification of the capital of the firms, mainly
via the acquisition of shares of firms associated with export activities.\textsuperscript{14} In fact, by the end of the decade the latter alternative began to represent an important part of the net incomes of firms, due to the high levels of profitability associated with export-oriented activities (ibid.: 15).

Therefore, despite the recession, high inflation and the instability of the 1980s, the large private firms adapted successfully both to the new situation created by the rupture of the financing pattern which was in operation before 1979 and to the adjustment programme adopted by the government in response to that rupture.\textsuperscript{15} Among these firms, those which first engaged in export-related activities were the ones which benefited most from the new institutional arrangements, for they were able both to profit from their productive activities and to protect their accumulated wealth in the financial sphere. However, even those which had their profits initially restricted only to financial applications managed to diversify over the decade through the establishment of a connection with highly profitable export-oriented activities.

6.4 The Maladjustment of the Public Sector

Although one of the longer-lasting consequences of the

\textsuperscript{14} The latter alternative was pursued not only because of all the advantages the government offered for activities integrated in the effort to generate large trade surpluses, but also because of the permanent and progressive fear of loss and devaluation of the financial wealth that the diverse stabilization plans implemented during the second half of the 1980s created (Almeida and Novais, 1991: 13). This point will be discussed in chapter 7.

\textsuperscript{15} As Cardoso de Mello (1992: 16, translated by this author) puts it, "[t]he large corporations, stimulated by the exchange rate and coerced by the recession, rapidly increased exports, protected their assets and their real profitability, got rid of their bank indebtedness and accumulated big financial surpluses, which had their value increased by high interest rates".
countercyclical policies adopted by the government from 1974 was the steady
deterioration of the public finances, the availability of external funds
to finance the growing public sector financing needs allowed the
maintenance of the same financing pattern until the end of the 1970s.\textsuperscript{16}Nevertheless, in 1979 policy-makers were already aware of both the
financial causes of the increasing public deficit and the deficit's
potential for becoming a serious problem in the near future. To combat the
crisis of public finances several measures were adopted between 1979–80
(e.g. the increase in public tariffs and the reduction of subsidies).
However, the absence of measures directed at tackling the external imbalance is a clear indication of how the potential of those imbalances
to further worsen the capacity of the government to finance its activities
was underestimated. That is, it was implicitly considered that, once the
domestic debt had been reduced and its increase controlled, the continuous
availability of external funds would guarantee the financing of the
government's activities without the need to increase domestic endebtment
(Carneiro, 1991: 150). The abrupt rise in international interest rates at
the beginning of the decade (Table 6.9) challenged that view, for the
significant increase in the service costs of the external debt (Table 6.2)
prompted the until then only potential financial crisis of the government
to assume its effective dimension (Table 6.8). Also, given the progressive
reduction in the availability of external funds to finance the newly
augmented needs for foreign currency, the government had no alternative but
to reduce foreign currency reserves. Accordingly, international reserves
fell from US$ 11.9 billion in 1978 to US$ 4 billion in 1982 (Table 6.3).
The reduction in foreign currency reserves was so severe that in 1983 they

\textsuperscript{16} Although the interest the government paid on its debts (both external and internal) in 1980 accounted for only 1\% of the GDP, it was double the amount paid in 1974.
could no longer be used to counteract the rise in external debt.

However, the full extent of the deterioration of the public accounts (both internally and externally) in the 1980s can only be entirely apprehended in the context of the strategy followed by the government to overcome the crisis of the balance of payments in the first half of the decade. Among the mechanisms used to attract foreign resources was the intensification of incentives for private agents to contract loans abroad, such as the widening of the differential between domestic and international interest rates (Table 6.9). This measure, in itself, provoked an increase in interest charges and, therefore, the increase in domestic public deficit. Moreover, the maxidevaluation of the Cruzeiro in 1983, which was aimed at increasing exports, raised external debt and reinforced the need to absorb more foreign currency. However, for the magnitude of resources involved, it is the process of "statization" of the privately assumed external debt that deserves more extended examination.

The institutional basis for the transfer of the external debt from private agents to the government had been created in the 1970s. Through mechanisms instituted by the Central Bank (Circular 230 and Resolution 432), private agents could convert debts contracted abroad into debts indexed to past domestic inflation. To do so, the debtors should make a deposit in Dollars with the Central Bank in the amount originally contracted with foreign creditors. Once they had made the deposit, the Central Bank would assume the responsibility for the debt. These mechanisms were intended to stimulate private agents to contract new loans in foreign currency in a context of crisis in the balance of payments and of instability of both international interest rates and exchange rates, for
all the risks would be assumed by the government.\footnote{The transaction, however, could be undone if the original debtors so wished. Thus, if pessimistic expectations concerning the exchange rate variation had dissipated, the original contractors of the debt could have access to the Dollars again. In this way, the government assumed all the risks without having the opportunity to profit from a favourable (although not probable) change in the external situation.} It was also employed, however, to transfer the stock of external debt from the private to the public sector. This was so because of the generalized fear, in the early 1980s, of a new maxidevaluation of the Cruzeiro as a means of increasing exports. This anticipation of what actually happened in 1983 created a widespread desire to eliminate the stock of foreign currency debt. And as the government needed the Dollars private agents were eagerly trying to pass on, there was a large use of those institutional mechanisms, whereby private external debt was transformed into public debt.\footnote{The operations involving the stock of debts assumed a particularly important role in the aftermath of the international financial market crisis of August 1982, when, given the extremely limited possibility of contracting new loans abroad, the Brazilian government had to take over part of the stock of private external debt to pay its own commitments.} As Oliveira (1989: 21-2, translated by this author) puts it, "to protect itself from both the risks of exchange rate variations and the increase in interest rates, the private sector ... transferred a significant portion of its external debt to the monetary authorities, ... thereby socializing the losses of the external crisis". As a consequence, the foreign currency registered deposits (DRME - Depósitos Registrados em Moeda Estrangeira) of the private sector in the Central Bank more than doubled between 1979 and 1983 (Table 6.10).

The statization of the private external debt was further compounded after the agreement reached with the IMF in February 1983. For institutional reasons, neither the "extended financing facility" provided by the IMF nor the compulsory loans provided by the foreign commercial
banks in the ambit of that agreement would be credited directly with the potential final debtors (either public or private). Instead, both the new loans and the resources for amortization of past debts (the so-called "project deposits") would be primarily deposited with Brazil's Central Bank, only afterwards being re-lent to the final debtors. That is, the new debt was initially assumed exclusively by the Central Bank, which had to negotiate with the external creditors the conditions for future payment. Only later - and according to those agreed conditions - would the foreign creditors try to re-lend these resources internally, whereby the liabilities of the Central Bank would be reduced and those of the final debtors increased. However, if no agreement were reached between the creditors and the potential final debtors, the Central Bank would have to assume the responsibility for the newly contracted debt, thereby becoming itself the final debtor and increasing its liabilities in terms of foreign currency. As a consequence, deposits and liabilities in foreign currency originally destined to be re-lent to private agents were transformed into a significant source of non-monetary resources to be applied in the partial refinancing of the public sector external debt.

Two other relevant aspects of this particular mechanism of statization of the external debt are the progressive concentration of the debt with the central government and the substitution of domestic for external debt. In the origin of these processes is the incapacity of the final debtors of the public sector (mainly state companies and state and local governments) to pay for the service (interest plus amortization) of their external debt incurred in the past.\footnote{As for the state companies, the incapacity to generate the resources necessary to pay the service of the debt basically reflected the deliberate policy of the government to increase public tariffs and the prices of the goods and services produced by the public sector below inflation rates. This policy was viewed as an attempt to control inflation} In this context, the central
government established a mechanism to provide bridging loans both to state companies and to state and local governments, so that they could pay their obligations at the time due. Ideally, these loans (Notice MF-30) would be short-term ones and no more than book-keeping operations, being liquidated as soon as the final public debtors had access, through re-lending operations, to the external resources deposited with the Central Bank. However, the amount of resources needed to pay the service on the external debt of the public debtors recurrently exceeded the amount of resources of the "project deposits" at the Central Bank (net of the re-lending operations to the private sector). Thus the central government had to use external resources previously incorporated by the Central Bank as the final debtor (project deposits not negotiated with the private sector) to fill the gap between the MF-30 bridging loans and the reduced availability of resources for effecting re-lending operations (Cavalcanti, 1988: 50). By so doing, the central government actually assumed part of the external debt contracted by state-owned firms and by state and local governments (Table 6.11).

However, even the sum of this additional endebtment plus the transfer of external debt from the private to the public sector (the statization of the external debt) was not capable of providing the government with the flow of foreign currency necessary to face the current obligations associated with its external debt. Indeed, the statization of the external debt itself increased the need for foreign currency, for it implied the assumption of the responsibility for paying the service on the newly assumed debt. Thus, the only way for the Central Bank to acquire the foreign currency required to finance the service of its external debt was

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growth, given the widespread use of the services and goods offered by the public sector.

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to buy the Dollars generated by the export sector, either through the issue of national currency or through the issue of public bonds. In the context of the recessionary adjustment plan—which was intended to reduce domestic absorption and to generate large trade surpluses—and of the high domestic interest rates then adopted, the second option prevailed. That is, the Dollars generated through trade surpluses were exchanged for indexed public bonds earning high interest rates, thereby allowing the government to finance its debt. Put another way, with the private sector as the holder of the trade surpluses and the government the major external debtor, there was no alternative for the latter except to increase its internal debt to buy the resources of the former, so that the external commitments could be honoured (Oliveira, 1989: 29-30).

In sum, the increasing need for foreign currency to finance the external debt of the public sector caused the deterioration of the public accounts and, given the limited availability of new external financing, provoked the expansion of the domestic endebtness of the government (Table 6.12). As a consequence, although the huge increase in the public debt observed in 1983 was mainly due to the rise of the external endebtness of the government (a result of the maxidevaluation of the Cruzeiro), from then onwards it is the expansion of the domestic debt that most contributes to the expansion of the public debt.\(^{20}\) In this sense, as Cavalcanti (1988: 51) puts it, there was a progressive substitution of the domestic for the external debt as a source of funds to finance the public sector.

Besides those mechanisms, other factors contributed to the

\(^{20}\) Besides the absolute increase of the domestic debt as an alternative source of financing in a context of non-availability of external funds, the generation of large trade surpluses from 1984 onwards contributed to the expansion of reserves of foreign currency and therefore, to the relative decrease in the net external debt (Teixeira and Biasoto, 1988: 57).
deterioration of public finances in the first half of the 1980s, thereby forcing the government to increase its domestic debt at high interest rates. First, there was a sharp decline in the net fiscal revenues of the government, despite attempts at increasing direct taxation. Such a decline was the outcome, on the one hand, of the maintenance—despite the claims to the contrary—of direct incentives and subsidies for export-related activities, and, on the other hand, of the decrease in the value of the tax collected. The government still attempted to compensate for the decline in its revenues through the reduction of its expenditures, especially new investments. However, given the impact of government expenditure on national income, this attempt also caused the deepening of the recession and therefore a severe reduction in the volume of taxes collected, making it a self-defeating policy (Carneiro, 1991: 158). That fiscal imbalance was further aggravated by the fact that the tight monetary policy adopted and the consequent high domestic interest rates which corrected the value of the domestic debt continually increased the financial component of the public deficit over the years.

Another important component of the fiscal crisis of the government relates to the deterioration of the financial situation of the state-owned firms. Unlike the large private firms, state companies were not allowed to reverse their balance sheets from the position of debtor to creditor in the early 1980s (Table 6.4). Similarly to the way these companies had been used during the 1970s to attract foreign currency to finance the new investments

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21 They rose from 1.5% to 2.7% of GDP between 1981-84 (Carneiro, 1991: 182).

22 Such a decline was a consequence of both the recession (which diminished the income to be taxed) and the increase of inflation, which depreciated the value of the taxes between the moment they were charged and the moment they were effectively paid (the so-called Oliveira Tanzi effect).
of the Second National Development Plan, in the 1980s they would serve the
government by attracting foreign funds to meet the deficit in the balance
of payments. Thus, the state-owned firms continued to increase their debts
in terms of foreign currency until 1982, when the international market
suspended new financings after the Mexican crisis (Almeida, 1988b: 14). As
a result of that strategy, they were in a much more fragile and exposed
situation than the private firms, having to assume all the risks of
variations in the exchange rates and/or international interest rates.

As a consequence, and in striking contrast to the private firms, the
performance of the state companies deteriorated over the years of the
recessive adjustment (1978-83) (Table 6.13). As they could not reduce their
degree of endebtment in terms of foreign currency — indeed it increased
over time — their current profit was consistently squeezed by debt
servicing. The risks of maintaining such a vulnerable financial structure
came to be true when, in 1983, the government opted for a new
maxidevaluation (30%) of the Cruzeiro against the Dollar. This fact,
associated with the rise in international interest rates, led the net
financial costs of the state-owned firms to a level of 24.1% of their
proceeds in 1983 (Almeida, 1988a: 109) and 16.6% of their current
expenditures in the same year (Oliveira, 1989: 23). Under such pressure,
even the continuous increase in the mark-up observed between 1980-84 (Table
6.5) was not capable of compensating for the enormous transfer of financial
resources the state companies had to realize.

From 1985 onwards, even reducing their long-term financial
commitments (although increasing their short-term endebtment) and
diminishing the proportion of their proceeds absorbed by financial costs,
the state companies did not manage to reach a balanced financial structure
(Almeida and Novais, 1991: 23-4). As they did not possess non-operational
revenues, they had to rely exclusively upon the rise of prices and tariffs to defend their current profitability. However, given the relative inflexibility of these firms to adopt price changes, their mark-ups did not rise as much as inflation rates (ibid.: 22).²³ As a consequence, their overall situation deteriorated still further during the second half of the 1980s, thereby adding to the financial imbalances of the government as a whole.

Thus, the main elements of the crisis of Brazilian public finances in the 1980s were already established in the first half of the decade: the rise of the public sector external debt (provoked both by the contraction of new loans and by the assumption of debts contracted by the private sector), the fiscal crisis (associated with the recessionary adjustment plan and with the subsidies given to the export sector), and the rise in domestic debt (a consequence of the pressures the first two elements were imposing upon the government budget). However, it was only between 1985-89, when the already reduced external financing was brought to a halt, that the crisis assumed the potential magnitude which was implicit in its determinants. Moreover, as the imbalances of the public sector increased over the decade, they also progressively revealed their financial nature. In fact, if one excludes from the public accounts the interest to be paid as service on the public debt (both external and domestic) between 1983-89, in only two years (1987 and 1989) did the central government incur a deficit. However, when one includes the interest in the accounts, the government was in deficit during the whole period. The consequence of this financial imbalance was the accelerated growth of both the external and the

²³ As already pointed out, the price policy of the state-owned firms was manipulated by the government for most of the decade as an attempt at bringing inflation rates down. Thus, as opposed to the private firms, they had their capacity to generate internal funds through increased mark-ups frequently obstructed.
domestic debts, with the latter progressively assuming a more important and structural dimension. In this context, the services associated with this progressive endebtedness themselves became the major item responsible for the generation of public sector deficits (Appy, 1993: 19).

The deterioration of the public finances between 1983–89 can be also appraised by an examination of the behaviour of some of their fiscal components (Table 6.14). Gross tax revenue, for instance – although increasing between 1985–86 – declined for the period as a whole. The reversal in 1985–86 was basically caused by an increase in the domestic absorption of domestic production during that sub-period, which augmented taxable income and diminished the fiscal renunciation associated with the large trade surpluses. Moreover, as inflation rates were drastically brought down in 1986 by a short-lived stabilization plan, the loss of revenue caused by the devaluation of taxes between the moment they are charged and the moment they are actually paid was also reduced. However, from 1987 onwards, with the return of domestic stagnation, large trade surpluses, and inflation acceleration, the tendency for the decline in gross tax revenue was confirmed. Net tax revenue, in turn, presents the same cyclical pattern outlined above for gross tax revenue. Besides being affected by the behaviour of gross tax revenue, that outcome is also a consequence of the decline in interest charges as a percentage of the GDP between 1985–87 and their increase in the following years. That initial decline can be explained both by the growth of GDP and by the decrease in interest rates (both internally and abroad) during that period. Between 1987–1989, instead, with the stagnation of GDP and the increase in interest rates, interest charges rose again. Additionally, the behaviour of net

24 The growth of domestic interest rates was to a large extent the outcome of attempts by the government to extend the maturity term of its bonds, so that its debt could be more easily financed over time and the
tax revenue is also explained by the fact that direct subsidies were kept constant during 1985-87 and reduced afterwards (Carneiro, 1991: 168-9).\textsuperscript{25}

As to government expenditure, the second half of the 1980s was the reverse of the first, although presenting equally ineffective outcomes. Whereas between 1981-84 the government drastically reduced its expenditures, between 1985-89 it increased them continuously, thereby aggravating the public deficit. One of the motives for this change in strategy was due to the need to transfer resources to the state companies, which were heavily indebted. That is, in order to solve the financial crisis of the state companies – which was provoked by the need to finance the public deficits in the beginning of the decade – the government added new pressures to its deficit in the second half of the 1980s. Moreover, the return to a democratic regime in 1985, after two decades of repressed demands on welfare policies and accumulated wage losses in the public sector, forced the government to increase its expenditures in a way incompatible with the maintenance of the fiscal balance. Thus, given the financial constraints of the public sector, originated from the stock of its debts, it seems that two equally inconsistent patterns of adjustment have been attempted in the 1980s. Initially, there was the drastic cutting of expenditure, and then, in the second half of the decade, excessive spending. Neither contributed to alleviating the financing difficulties of the public sector (ibid: 175).

Given these general features of the public finances in the 1980s, one pressure on the deficit alleviated. However, despite progressively higher interest rates offered by the government, it had to shorten the maturity term of its bonds to persuade private agents to continue financing its recurrent deficits.

\textsuperscript{25} It must be noted, however, that indirect subsidies caused by the difference between the growth of inflation and the growth of the tariffs and the prices of the public services and goods are a constant for the whole period (Carneiro, 1991: 170).
can say that the imbalances of the public sector have changed in nature during the decade. Until 1982 the main component of the public deficit was the interest charge on the external debt, which was mainly financed by the expansion of the external debt itself. After 1982, with the crisis of the international financial market, the financing of the deficit began to be made through the expansion of both the external debt and, progressively assuming more importance, the domestic debt as well. Moreover, an increasing proportion of private debts was transferred to the Central Bank, thereby expanding the financing needs of the public sector. As a consequence of both the increase of the domestic debt and the high domestic interest rates adopted over the decade, the interest charge associated with the domestic debt gradually assumed greater importance in the composition of the public deficit (Appy, 1993: 19). In a self-reinforcing manner, then, the need to finance the public deficit (which was increasing its financial component) forced the government, in the absence of external funds, to increase the domestic debt. This, in turn, led to higher interest rates, to the drastic shortening of the debt profile, to the expansion of the interest charge of the public debt and therefore to a further increase in the deficit.

An important point which must be emphasized is the connection between the adjustment of the private sector and the maladjustment of the public sector, for these processes are the reverse of each other. It was through the deterioration of the public finances that the private sector found the means to make the necessary adjustments for facing the financing crisis. In other words, the public sector created the conditions for private agents to escape from the instability associated with the debts contracted abroad and provided them with direct and indirect subsidies to maintain their profitability over the decade. However, it was neither the indulgence of
the public sector nor the efficiency of the private sector alone which caused this result (Teixeira and Biasoto, 1988: 7). Instead, it must be understood as the inevitable outcome of the adjustment strategy followed by the Brazilian government to face its financing crisis in the late 1970s.

6.5 Main Features of the Adaptation of the High Inflation Regime

Considering the progressive acceleration of inflation over the 1980s as the backdrop to the responses of both private agents and the government to the financing crisis which emerged in the late 1970s, it is possible to argue that the major features of the adaptation of the Brazilian high inflation regime during the first half of the decade are intrinsically connected to those responses. The most distinctive aspect of that adaptation was the widespread use of government bonds and government bond-based applications as instruments to store value. Although this move—reversing the flight from those bonds observed in the turbulent years of 1979-80—seems to be the most rational action to have been taken, it must be pointed out that it was only feasible because of the choice the government made for a specific route of adjustment to the financing crisis. That is, the availability of reliable instruments to be used as a store of value in an environment of high and rising inflation was the counterpart of the voluntary commitment of the government to attract funds from the public to finance its expenditures, which could only be successful through the issue of highly liquid interest-bearing indexed bonds. If the government had decided to take an alternative route to alleviate its financial burdens (e.g. an external moratorium, a severe fiscal reform or a combination of both) the evolution of the Brazilian high inflation regime

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26 The institutional mechanisms whereby the selling of government bonds were effected did not differ, in any relevant way, from the way it had been done in the late 1970s (see chapter 5).
would certainly have been completely different.

The other important trait of the Brazilian high inflation regime in the early 1980s was the return to widespread indexation of monetary contracts. The recovery of confidence in the index employed to correct nominal contractual values according to past inflation was also dependent on the deliberate decision of the government not to disrupt the institutional framework which provided it with the resources necessary to finance its deficits. However, in the context of high and rising inflation, to readjust contractually-established monetary values according to the variation of a reliable index is not a sufficient condition for maintaining confidence in the permanence of the real value of the contracts over time. It is also necessary to shorten their readjustment period, so that the loss of average real income between any two subsequent readjustment points may be diminished. Thus, during the first half of the decade the indexation period reduced steadily until the point at which most inter-firm contractual relations were readjusted on a monthly basis.

Therefore, the institutional changes associated with the adjustment policy implemented by the government provided entrepreneurs with reliable financial and monetary instruments which, together, were capable of performing the basic and more important functions of money. Despite high and rising levels of inflation during the first half of the 1980s, those agents could establish monetary contracts and put the productive sphere in motion. However, the stability of those institutional arrangements — and therefore the preservation of the unity of the functions of money — would depend both on the maintenance of the confidence in their capacity to overcome the disruptive effects of high and rising inflation and on their ability to adapt to the pressures brought about by still higher inflation rates.
In the context of the ever-accelerating inflation of the second half of the 1980s, confidence in that reformed institutional framework, which had been able to maintain the unity of the functions of money for most of the first half of the decade, began to be threatened. The main reason for that was the fact that the index which measured past inflation was no longer regarded as reliable enough to be used to correct nominal contractual values in an environment of rising inflation rates. If left unchanged, therefore, confidence in the high inflation regime would soon collapse and the resulting breakdown of the unity of the functions of money generalized for all economic agents. In this situation of hyperinflation, any possibility of compromise between antagonistic private interests would vanish, thereby disrupting the social space — the productive sphere — in which private and social interests can be made compatible. To avoid such a rupture and the ensuing disorganization of the economy, the government had no alternative but to implement institutional changes.

The institutional framework of the high inflation regime began to be improved through the issue, in 1986, of a new government bond called LBC (Letra do Banco Central — Central Bank Bill), whose proceeds were no longer indexed to past inflation. Instead, they were equivalent to the daily average overnight interest rates, and thus incorporated agents’ daily expectations about future inflation. By so doing, the government placated the fears of the private agents that they would lose wealth with the acceleration of inflation. From the point of view of the entrepreneurs who had become liquid in the adjustment process of the first half of the decade, LBC-based operations in the financial market offered the guarantee of profitability and liquidity which could not be beaten by any other asset. In fact, for its very attractive features the LBC would be maintained practically as the only government bond to be actively
negotiated in the financial market until the end of the decade.\footnote{Although in 1987 the LBCs began to be issued by the Treasury and changed their denomination to LFT (\textit{Letra Financeira do Tesouro} - Treasury Financial Bill), they will continue to be referred to, for the sake of simplicity, as LBC.}

The accessibility to these operations was also widened over time. In October 1986 the government authorized the creation of the so-called Short-Term Funds by the banks, which should allocate at least 40\% of their resources to the purchase of LBCs. Due to their operational facilities, these funds made the overnight market, and therefore the one-day liquidity applications, accessible to a large proportion of the public which had only very limited access to government bond-based applications. Until then, most of the banks either did not accept daily investments for small amounts or remunerated them with interest rates which represented only a fraction of the average overnight rate. With the Short-Term Funds, however, small applications received almost identical daily interest rates to those offered to the bigger investors who negotiated with government bonds directly in the overnight market. Moreover, competition between the banks for the resources of the public (so that they could increase their profit as intermediaries of the financial needs of the government) led to the adoption of further institutional innovations, which brought the remuneration and liquidity of those funds still closer to direct overnight transactions (Eduardo Carvalho, 1992a: 140).

Actually, the resources allocated to those financial operations could be immediately converted into the legal means of payment whenever the investor wished, thereby functioning, in practical terms, as indexed current accounts remunerated according to the variation in overnight interest rates. In contrast to the system which had prevailed in the preceding years, which had been based on repurchasing operations agreed
between the government and the banks, now the applications based on public bonds could be directly linked to the ordinary non-indexed current accounts (Barros, 1991: 19).\textsuperscript{28} Thus, although not being offered interest rates as high as those negotiated with richer individuals and large private firms, the middle-class informed citizen had, in the LBC-related applications, the best option for preserving their wealth when compared to the then very volatile alternatives.\textsuperscript{29} Once again, however, workers and the poor in general were left without any formal defence against the devaluation of their wealth by inflation, for even the Short-Term Funds demanded minimum applications which were too high when compared to the average income of those groups. Not surprisingly, then, the profile of income distribution deteriorated still further and the social crisis became still more dramatic over the second half of the 1980s (Table 6.15).

The introduction of LBCs also reduced the already low risk of losses

\textsuperscript{28} Thus, a firm or individual could apply their resources with indexed and remunerated applications based on public bonds in the morning of a day and spend part or all of the amount applied during the rest of the day or evening through the emission of cheques drawn against their current accounts. The following morning, as cheques were cleared, the firm or individual would simply make a telephone request for the bank to transfer the amount spent the day before from their application to their current account, which would be promptly made without any costs for the holder of the account. In this sense, the LBC-based applications possessed the same discharging power enjoyed by ordinary current accounts (Barros, 1991: 20). Afterwards, the banks also introduced the so-called "remunerated accounts", which allowed any daily balance left idle in the current accounts above a certain stipulated level to be automatically applied in short-term funds, even if the holder of the account had not demanded the application to be done (Eduardo Carvalho, 1992a: 169).

\textsuperscript{29} In high inflation regimes, it is common for the Dollar to assume the store-of-value function of money, given its high degree of liquidity and its capacity to maintain a comparatively stable purchasing power. In Brazil, however, neither the existence of Dollar bank accounts nor the private holdings of Dollars is legally permitted. Obviously, it does not impede the existence of a black market for the American currency, whose variation reflects, in some measure, the degree of confidence in the legal alternatives for storing wealth. However, given its small relative dimension, the black market is highly unstable and vulnerable to speculative moves, which reduces its attractiveness as a reliable alternative abode for the purchasing power of the private agents.
for the institutions which financed the government. As the daily remuneration the government paid to the banks to buy LBCs was equal to the daily average interest rate in the overnight market, losses would only occur if, in the case of a very intense variation of the overnight rates during the same day, the banks offered final investors a remuneration above the average. However, as the Central Bank was emitting signals that the stability of interest rates was being pursued, this outcome was believed unlikely (Eduardo Carvalho, 1992a: 137). Thus, the LBC innovation virtually guaranteed the profitable operation of the banks, which, in the Brazilian high inflation regime, possessed two main sources of profit. First, the gains originated from their acting as intermediaries between the government — which needed to sell its bonds — and the private agents — who were eagerly looking for ways of escaping the devaluation of their wealth caused by inflation. Second, the gains obtainable through the use of resources attracted at insignificant or null cost (those left idly in the current accounts for more than one day) to buy government bonds.\textsuperscript{30} In such a framework, the higher the level of inflation and the higher the interest rates offered by the government the greater the magnitude of the spreads attained in these processes by the banks.\textsuperscript{31} Accordingly, not only could the large private firms and the better-off individuals profit from the institutional adaptations of the high inflation regime in Brazil. The banks

\textsuperscript{30} Money was left idly in current accounts mainly by the large proportion of the population which could not have access to financial assets protected against inflation. Although this mechanism provided the banks with a higher spread than their acting as intermediaries between the government and the private agents, the magnitude the latter mechanism achieved over the decade made this one the major source of profit for the financial sector.

\textsuperscript{31} Not surprisingly, the net profitability of the financial sector fell in 1986 (a year in which inflation was reduced and so were the real interest rates) and increased between 1987-89, period in which both inflation and interest rates accelerated.
also increased their profitability at the expense both of the public sector and of those individuals too poor or ignorant to have access to the defensive institutions then available. As a consequence of the selective availability of those mechanisms, the banks obtained net profitability during the 1980s consistently superior to that obtained by the private sector as a whole. Through this the banks increased their participation in GDP from 7.2% in 1980 to 19.5% in 1989 (Eduardo Carvalho, 1992c: 87).

In spite of the monthly indexation of most of the inter-firm monetary contracts to past inflation, rising inflation was also putting at risk the use of the national currency as a standard of value. That is, because of the magnitude of the devaluation of the contracts denominated in the national currency within the indexation interval, private agents began to look for other standards whose values were subject to more frequent correction. To avoid the spontaneous indexation to alternative assets (e.g. Dollar or gold), for such a move would disrupt the relative prices and provoke further confusion and disappointment as to the contractual mechanisms of transfer of wealth, the government created the conditions for the daily indexation of contracts. This was made possible through fixing the daily value of the BTN (Bônus do Tesouro Nacional - National Treasury Bond), a purely nominal bond whose daily value varied according to the daily expectation of monthly inflation. Thus, any kind of contractual payment (financial applications, service contracting, taxes, debts, etc.) and even the prices of goods and services could be indexed to the daily

---

32 In fact, as no index of prices is comprehensive enough to reflect, with reasonable accuracy, the rise of all prices, changes in relative prices of indexed contracts is inevitable. However, if the majority of agents adopt the same index to correct their contracts, relative prices will vary less than in the case in which several indexes are employed.

33 The OTN (Obrigaçào do Tesouro Nacional - National Treasury Liabilities) was another nominal bond created with characteristics almost identical to those of the BTN.
variation of the BTN (Belluzzo and Almeida, 1992b: 25). Through these modifications, the government strengthened the system of indexation, thereby answering the demands of the private sector for institutions flexible enough to preserve their wealth in an environment of high and accelerating inflation.

Thus, new institutional rules were adopted in the second half of the decade to placate the fears of private agents concerning the conservation of the value of their liquid wealth and of their contractual relations over time. To protect their real value private agents had only to transform their wealth into fully indexed LBC-based assets (overnight operations, savings accounts, short-term funds) and to establish monetary contracts indexed to the daily nominal bond (BTN). In a context of accelerating inflation, there was a progressive and significant transfer of resources from non-indexed financial assets towards assets anchored to government bonds. In other words, as the institutional adaptation carried out in the Brazilian high inflation regime created a stable channel for immediately converting assets capable of serving as store of value into the legally enforced means of payment, there was a huge relocation of resources in search of the stability offered, especially towards the end of the decade. Accordingly, the participation of Federal Bonds in the total of the main financial assets increased at the expense of the reduction in M1, most obviously, but also in time deposits. In this sense, government bonds, short-term funds and savings accounts operated as instruments for storing value in general, regardless of original past motives or actual future

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34 For instance, a contract established between the present author (economist) and a consultant firm in January 1989 for the former to write a paper fixed the value of the contract in 110 OTNs, which would be paid in three instalments: 30 OTNs at the beginning of the work, 40 OTNs for the delivery of the first draft, and 40 OTNs after the delivery of the final version.
uses. The magnitude of these changes can be partially assessed by the fact that whereas the value of public bonds and savings accounts as a percentage of GDP grows respectively from 4.2% and 6.3% in 1980 to 13.9% and 8.1% in 1989, the total of time deposits, also as percentage of GDP, declined from 4.0% in 1980 to 2.8% in 1989 (Table 6.16).

In terms of the theoretical approach developed in section 2.4, one can say that rising inflation affected agents' expectations concerning the liquidity of assets in such a way that most financial assets were widely regarded as being located beyond the point of "maximum sustainable loss" in the "gambler indifference map".\textsuperscript{35} The national currency, more obviously than any other asset, had its capacity to conserve purchasing power over time enormously reduced. Accordingly, one can observe a steady reduction in M1 over the whole decade, except for the moments when the short-lived stabilization plans were implemented. Yet even financial assets with some sort of protection (e.g. time deposits) were progressively exchanged over the decade for applications based on public bonds. This was so either because of their imperfect indexation clauses or because the instability of their markets was causing their relative position in the indifference map to move continuously south-eastwards. By the end of the 1980s, overnight purchases of public bonds, either directly or intermediated by banks via the short-term funds, were the assets whose pair of focus gain/focus loss points lay more north-westward in the indifference map than any other available asset. As they could be instantaneously converted into the legal means of payment and were believed to conserve their purchasing power over time, they were widely regarded as the most liquid of the available assets and, as such, the more apt to perform the store-of-value

\textsuperscript{35} This effect of accelerating inflation on the degree of liquidity assigned to particular assets is discussed in section 4.2 above.

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function of money.

At the same time as the bulk of liquid private wealth was being concentrated in government bond-based applications, there was widespread indexation of contracts and prices, largely based on the daily value of the BTNs. Moreover, late in 1989, the BTN itself was ratified as an alternative and legal standard of value. Both the concentration of wealth in terms of government bond-based applications and the almost complete indexation of contracts expressed the adaptation of an institutional structure which allowed the maintenance of the unity of the functions of money. On the one hand, there was a set of institutions which regulated the convertibility of assets regarded as reliable stores of value (government bond-based applications) into the socially accepted and legally enforced means of payment (the national currency). On the other hand, there was another set of institutions that allowed the correction of the value of contracts established in terms of either the national currency or BTN according to the daily inflation, so that the losses in value inflation caused could be compensated for on a daily basis. Thus, despite high and rising inflation, the unity of the functions of money was maintained for most of the decade. That is, there was a set of monetary and financial instruments performing the functions of money which were believed to be convertible into each other at stable terms over time (Table 6.17). Put another way, as the modifications of the Brazilian high inflation regime in the 1980s continually adjusted the behaviour of the agents to an ever-accelerating inflation, one can say that they both improved and consolidated the culture of inflation, so that, for most of the decade, money was conserved as a social institution.

Despite this apparent solidness, the Brazilian high inflation regime had a basic contradiction. On the one hand, given the nature of all those
institutional changes, the maintenance of the Brazilian high inflation regime in the 1980s still depended — perhaps still more than in the 1960s or 1970s — on the confidence in the capacity of the State to maintain the stability of its institutions. On the other hand, however — and certainly with more damaging consequences than in the preceding decades —, the costs of those adaptations continued to be all borne by both the State and low-income groups. Although conciliated over several years, by the end of the 1980s these two basic features of the Brazilian high inflation regime could no longer coexist. In this sense, as will be shown in the next chapter, the history of the monetary crisis of the 1980s in Brazil is the history of the progressive deterioration of the confidence in the capacity of the State to maintain the stability of that regime.
Table 6.1 Annual rate of growth of selected macroeconomic indicators (1979-89).

<table>
<thead>
<tr>
<th>Years</th>
<th>GDP</th>
<th>GDP per capita</th>
<th>Production</th>
<th>Investment</th>
<th>Inflation (GPI - DS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>6.8</td>
<td>4.3</td>
<td>6.8</td>
<td>3.9</td>
<td>77.2</td>
</tr>
<tr>
<td>1980</td>
<td>9.3</td>
<td>6.8</td>
<td>9.2</td>
<td>9.2</td>
<td>110.2</td>
</tr>
<tr>
<td>1981</td>
<td>-4.4</td>
<td>-6.6</td>
<td>-8.8</td>
<td>-12.3</td>
<td>95.2</td>
</tr>
<tr>
<td>1982</td>
<td>0.6</td>
<td>-1.6</td>
<td>0.0</td>
<td>-6.2</td>
<td>99.7</td>
</tr>
<tr>
<td>1983</td>
<td>-3.4</td>
<td>-5.6</td>
<td>-5.9</td>
<td>-16.3</td>
<td>211.0</td>
</tr>
<tr>
<td>1984</td>
<td>5.3</td>
<td>3.0</td>
<td>6.6</td>
<td>0.2</td>
<td>223.8</td>
</tr>
<tr>
<td>1985</td>
<td>8.0</td>
<td>5.6</td>
<td>8.3</td>
<td>12.2</td>
<td>235.1</td>
</tr>
<tr>
<td>1986</td>
<td>7.6</td>
<td>5.3</td>
<td>11.7</td>
<td>22.2</td>
<td>65.0</td>
</tr>
<tr>
<td>1987</td>
<td>3.6</td>
<td>1.4</td>
<td>1.0</td>
<td>-0.4</td>
<td>415.8</td>
</tr>
<tr>
<td>1988</td>
<td>-0.1</td>
<td>-2.2</td>
<td>-2.5</td>
<td>-7.2</td>
<td>1037.6</td>
</tr>
<tr>
<td>1989</td>
<td>3.2</td>
<td>1.2</td>
<td>2.9</td>
<td>1.2</td>
<td>1782.9</td>
</tr>
</tbody>
</table>

Source: Banco Central do Brasil and FIBGE.

Notation:
GPI - General Price Index
DS - Domestic Supply
Table 6.2 Balance of payments (1978-89).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade Balance-FOB</td>
<td>-1.02</td>
<td>-2.84</td>
<td>-2.82</td>
<td>1.20</td>
<td>0.78</td>
<td>6.47</td>
</tr>
<tr>
<td>Exports</td>
<td>12.66</td>
<td>15.24</td>
<td>20.13</td>
<td>23.29</td>
<td>20.17</td>
<td>21.90</td>
</tr>
<tr>
<td>Imports</td>
<td>13.68</td>
<td>18.08</td>
<td>22.95</td>
<td>22.09</td>
<td>19.39</td>
<td>15.43</td>
</tr>
<tr>
<td>Services (net)</td>
<td>-6.04</td>
<td>-7.92</td>
<td>-10.15</td>
<td>-13.13</td>
<td>-17.08</td>
<td>-13.41</td>
</tr>
<tr>
<td>Interest</td>
<td>-2.70</td>
<td>-4.18</td>
<td>-6.31</td>
<td>-9.16</td>
<td>-11.35</td>
<td>-9.55</td>
</tr>
<tr>
<td>Other Services</td>
<td>-0.77</td>
<td>-1.00</td>
<td>-1.27</td>
<td>-1.22</td>
<td>-2.11</td>
<td>-1.45</td>
</tr>
<tr>
<td>Transfers</td>
<td>0.07</td>
<td>0.01</td>
<td>0.17</td>
<td>0.20</td>
<td>0.00</td>
<td>0.10</td>
</tr>
<tr>
<td>Current Trans.</td>
<td>-6.99</td>
<td>-10.74</td>
<td>-12.80</td>
<td>-11.73</td>
<td>-16.31</td>
<td>-6.84</td>
</tr>
<tr>
<td>Capital</td>
<td>11.89</td>
<td>7.66</td>
<td>9.68</td>
<td>12.77</td>
<td>7.85</td>
<td>2.10</td>
</tr>
<tr>
<td>Errors and Omissions</td>
<td>-0.64</td>
<td>-0.13</td>
<td>-0.34</td>
<td>-0.41</td>
<td>-0.37</td>
<td>-0.67</td>
</tr>
</tbody>
</table>

Source: *Banco Central do Brasil, Brazil - Economic Program, several issues.*
Table 6.2 Balance of payments (1978-89).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exports</td>
<td>27.00</td>
<td>25.64</td>
<td>22.39</td>
<td>26.22</td>
<td>33.79</td>
<td>34.40</td>
</tr>
<tr>
<td>Imports</td>
<td>13.91</td>
<td>13.17</td>
<td>14.04</td>
<td>15.05</td>
<td>14.60</td>
<td>18.26</td>
</tr>
<tr>
<td>Services (net)</td>
<td>-13.21</td>
<td>-12.89</td>
<td>-12.46</td>
<td>-12.05</td>
<td>-14.37</td>
<td>-14.80</td>
</tr>
<tr>
<td>Other Services</td>
<td>-0.87</td>
<td>-1.23</td>
<td>-3.37</td>
<td>-3.26</td>
<td>-4.54</td>
<td>-5.17</td>
</tr>
<tr>
<td>Transfers</td>
<td>0.17</td>
<td>0.15</td>
<td>0.09</td>
<td>0.07</td>
<td>0.09</td>
<td>0.24</td>
</tr>
<tr>
<td>Current Trans.</td>
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<td>-0.27</td>
<td>-4.03</td>
<td>-0.81</td>
<td>4.90</td>
<td>1.59</td>
</tr>
<tr>
<td>Capital</td>
<td>0.25</td>
<td>-2.73</td>
<td>0.94</td>
<td>-1.70</td>
<td>2.89</td>
<td>-4.18</td>
</tr>
<tr>
<td>Errors and Omissions</td>
<td>0.40</td>
<td>-0.53</td>
<td>-0.54</td>
<td>-0.47</td>
<td>-0.82</td>
<td>-0.80</td>
</tr>
<tr>
<td>Surplus/Deficit</td>
<td>0.70</td>
<td>-3.52</td>
<td>-3.63</td>
<td>-2.99</td>
<td>6.98</td>
<td>-3.39</td>
</tr>
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</table>

Source: Banco Central do Brasil, Brazil - Economic Program, several issues.
Table 6.3  Gross foreign debt and net foreign debt (1978-89).

<table>
<thead>
<tr>
<th>Years</th>
<th>Gross Foreign Debt</th>
<th>Reserves</th>
<th>Net Foreign Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>43.5</td>
<td>11.9</td>
<td>31.6</td>
</tr>
<tr>
<td>1979</td>
<td>55.8</td>
<td>9.7</td>
<td>46.1</td>
</tr>
<tr>
<td>1980</td>
<td>64.2</td>
<td>6.9</td>
<td>57.3</td>
</tr>
<tr>
<td>1981</td>
<td>73.9</td>
<td>7.5</td>
<td>66.4</td>
</tr>
<tr>
<td>1982</td>
<td>85.3</td>
<td>4.0</td>
<td>81.3</td>
</tr>
<tr>
<td>1983</td>
<td>93.5</td>
<td>4.6</td>
<td>88.9</td>
</tr>
<tr>
<td>1984</td>
<td>102.0</td>
<td>12.0</td>
<td>90.0</td>
</tr>
<tr>
<td>1985</td>
<td>105.1</td>
<td>10.5</td>
<td>94.6</td>
</tr>
<tr>
<td>1986</td>
<td>111.0</td>
<td>6.7</td>
<td>104.3</td>
</tr>
<tr>
<td>1987</td>
<td>121.2</td>
<td>7.5</td>
<td>113.7</td>
</tr>
<tr>
<td>1988</td>
<td>113.5</td>
<td>9.1</td>
<td>104.4</td>
</tr>
<tr>
<td>1989</td>
<td>114.7</td>
<td>9.7</td>
<td>105.0</td>
</tr>
</tbody>
</table>

Table 6.4 Degree of bank indebtedness (financing as a proportion of liabilities) (1978-89).

<table>
<thead>
<tr>
<th>Year</th>
<th>short-term financings</th>
<th>long-term financings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NPF</td>
<td>FF</td>
</tr>
<tr>
<td>1978</td>
<td>10.53</td>
<td>8.62</td>
</tr>
<tr>
<td>1979</td>
<td>11.73</td>
<td>12.20</td>
</tr>
<tr>
<td>1981</td>
<td>11.65</td>
<td>15.02</td>
</tr>
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<td>1982</td>
<td>8.37</td>
<td>12.03</td>
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<td>1983</td>
<td>7.82</td>
<td>11.42</td>
</tr>
<tr>
<td>1984</td>
<td>7.98</td>
<td>10.25</td>
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<tr>
<td>1985</td>
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<td>8.70</td>
</tr>
<tr>
<td>1986</td>
<td>7.41</td>
<td>7.78</td>
</tr>
<tr>
<td>1987</td>
<td>8.49</td>
<td>8.19</td>
</tr>
<tr>
<td>1988</td>
<td>8.75</td>
<td>7.58</td>
</tr>
<tr>
<td>1989</td>
<td>6.75</td>
<td>7.09</td>
</tr>
</tbody>
</table>


Notation:
NPF: national private firms
FF: foreign firms
SOF: state-owned firms
Table 6.5 Mark-up and profit rate (1978-89).

<table>
<thead>
<tr>
<th>Year</th>
<th>mark-up&lt;sup&gt;1&lt;/sup&gt;</th>
<th>profit rate&lt;sup&gt;2&lt;/sup&gt;</th>
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<tr>
<td>1989</td>
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<td>50.82</td>
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1. (operational and non-operational net revenues less costs of production) / costs of production.
2. operational and non-operational profits / total assets.
Table 6.6 Selected indicators - national private firms (1978-89).

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Notation:
- NOR: Net operational revenues.
- CP: Costs of production (costs of inputs and wages associated with production).
- NFE: Net financial expenses (difference between financial costs and proceeds from financial applications).
- PC: Profits from coalition (profits associated with investments in other firms).
- ONOP: Operational and non-operational profits (adjusted for inflationary effects).
- NP: Net profits (adjusted for inflationary effects and net of taxes).
Table 6.7 Asset structure - national private firms (1978-89).

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<td>33.00</td>
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<td>34.72</td>
<td>33.48</td>
<td>34.43</td>
<td>34.05</td>
<td>32.98</td>
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</tbody>
</table>


Notation:
- DISP. (disposable): assets with immediate liquidity
- CUST. (customers): credits associated with the main activity of the firm
- INV. (investments): shares of other firms
- IMO. (imobilized): value of the sites, buildings, machines, etc., less depreciation
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<th>Private Debt</th>
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<td>US$ bi %</td>
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<td>15.9 31.9</td>
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<td>53.8</td>
<td>37.3 69.3</td>
<td>16.5 30.7</td>
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<td>41.8 68.1</td>
<td>19.6 31.9</td>
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Table 6.9 Annual average external and domestic interest rates (1978-89)

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<td>6.1</td>
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<td>5.8</td>
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Table 6.10  Foreign currency registered deposits – DRME (1979–89).

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<tr>
<th>Years</th>
<th>DRME of the private sect. in the Central Bank (US$ billion)</th>
<th>Net foreign debt of the public sector (US$ billion)</th>
<th>DRME/net for. debt of the Fed. Gov. + Central Bank (%)</th>
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Obs: the net foreign debt of the public sector began to be calculated by the Central Bank only in 1981.
Table 6.11 Net foreign debt of the public sector (1981-89).

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<td>US$ bi %</td>
<td>US$ bi %</td>
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Table 6.12 Net debt of the public sector as a percentage of GDP (1981–89).

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<th>Foreign (B)</th>
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<th>(B)/(A+B) (%)</th>
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Table 6.13 Selected indicators - state-owned firms (1978-89).

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Notation:
NOR: net operational revenues.
CP: costs of production (costs of inputs and wages associated with production).
NFE: net financial expenses (difference between financial costs and proceeds from financial applications).
PC: profits from coalition (profits associated with investments in other firms).
ONOP: operational and non-operational profits (adjusted for inflationary effects).
NP: net profits (adjusted for inflationary effects and net of taxes).
Table 6.14  Gross and net tax revenue as a percentage of GDP (1981-89).

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<td>8.5</td>
<td>9.7</td>
<td>13.2</td>
<td>11.9</td>
<td>10.6</td>
<td>9.4</td>
</tr>
</tbody>
</table>

Source: Banco Central do Brasil, as quoted by Carneiro (1991).

1. excludes other net current revenues.
Table 6.15 Personal income distribution in Brazil (1981-89).¹

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10% poorest</td>
<td>0.9</td>
<td>1.0</td>
<td>0.9</td>
<td>0.8</td>
<td>1.0</td>
<td>0.8</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>20% poorest</td>
<td>2.9</td>
<td>2.8</td>
<td>2.7</td>
<td>2.5</td>
<td>3.1</td>
<td>2.7</td>
<td>2.2</td>
<td>2.3</td>
</tr>
<tr>
<td>50% poorest</td>
<td>14.5</td>
<td>13.4</td>
<td>13.4</td>
<td>12.8</td>
<td>13.5</td>
<td>13.0</td>
<td>12.0</td>
<td>11.2</td>
</tr>
<tr>
<td>10% richest</td>
<td>44.9</td>
<td>46.7</td>
<td>46.8</td>
<td>47.6</td>
<td>47.3</td>
<td>46.9</td>
<td>49.7</td>
<td>51.5</td>
</tr>
<tr>
<td>5% richest</td>
<td>31.9</td>
<td>33.1</td>
<td>33.3</td>
<td>33.9</td>
<td>33.9</td>
<td>33.3</td>
<td>35.8</td>
<td>37.7</td>
</tr>
<tr>
<td>1% richest</td>
<td>12.1</td>
<td>13.2</td>
<td>13.0</td>
<td>13.3</td>
<td>14.0</td>
<td>13.5</td>
<td>14.2</td>
<td>15.9</td>
</tr>
</tbody>
</table>

Source: IBGE, PNAD

1. Data for 1982 not available.
Table 6.16 Main financial assets as a percentage of GDP (1980-89).

<table>
<thead>
<tr>
<th>Year</th>
<th>M1</th>
<th>Public Bonds</th>
<th>M2</th>
<th>Savings Deposits</th>
<th>M3</th>
<th>Time Deposits</th>
<th>M4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>8.8</td>
<td>4.2</td>
<td>13.0</td>
<td>6.3</td>
<td>19.3</td>
<td>4.0</td>
<td>23.3</td>
</tr>
<tr>
<td>1981</td>
<td>7.3</td>
<td>5.4</td>
<td>12.7</td>
<td>7.0</td>
<td>19.8</td>
<td>3.7</td>
<td>23.5</td>
</tr>
<tr>
<td>1982</td>
<td>6.5</td>
<td>6.8</td>
<td>13.4</td>
<td>8.1</td>
<td>21.4</td>
<td>4.5</td>
<td>26.0</td>
</tr>
<tr>
<td>1983</td>
<td>5.2</td>
<td>6.0</td>
<td>11.2</td>
<td>9.2</td>
<td>20.4</td>
<td>5.0</td>
<td>25.3</td>
</tr>
<tr>
<td>1984</td>
<td>3.8</td>
<td>6.6</td>
<td>10.4</td>
<td>9.4</td>
<td>19.8</td>
<td>5.7</td>
<td>25.5</td>
</tr>
<tr>
<td>1985</td>
<td>3.7</td>
<td>10.4</td>
<td>14.1</td>
<td>9.2</td>
<td>23.3</td>
<td>6.2</td>
<td>29.5</td>
</tr>
<tr>
<td>1986</td>
<td>8.2</td>
<td>9.3</td>
<td>17.5</td>
<td>8.1</td>
<td>25.6</td>
<td>6.1</td>
<td>31.7</td>
</tr>
<tr>
<td>1987</td>
<td>4.6</td>
<td>10.1</td>
<td>14.7</td>
<td>9.7</td>
<td>24.4</td>
<td>4.9</td>
<td>29.2</td>
</tr>
<tr>
<td>1988</td>
<td>2.8</td>
<td>12.2</td>
<td>15.0</td>
<td>10.8</td>
<td>25.7</td>
<td>4.1</td>
<td>29.8</td>
</tr>
<tr>
<td>1989</td>
<td>2.1</td>
<td>13.9</td>
<td>16.0</td>
<td>8.1</td>
<td>24.1</td>
<td>2.8</td>
<td>26.9</td>
</tr>
</tbody>
</table>

Table 6.17 Main instruments used to perform the functions of money (1980–89)

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Standard of Value</td>
<td>National Currency¹</td>
<td>National Currency</td>
<td>National Currency</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BTN</td>
</tr>
<tr>
<td>Means of Payment</td>
<td>National Currency</td>
<td>National Currency</td>
<td>National Currency</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dollar</td>
</tr>
<tr>
<td>Store of Value</td>
<td>ORTN</td>
<td>LBC</td>
<td>LBC</td>
</tr>
<tr>
<td></td>
<td>Savings Accounts</td>
<td>Short-term funds</td>
<td>Short-term funds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Savings Accounts</td>
<td>Savings Accounts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Others²</td>
</tr>
</tbody>
</table>


2. Dollar, gold, land, etc.. For the role of these assets as store of value, see discussion in chapter 7.
CHAPTER 7. THE ROUTE TO THE HYPERINFLATION REGIME

7.1 Introduction

The articulation of the responses of both the government and private firms to the financing crisis which emerged in the late 1970s provoked, as analysed in the preceding chapter, important changes in the financial structure over the 1980s. By assuming most of the risks of adjustment, the government created mechanisms for the private sector to improve its overall "real" performance and to overcome the financing crisis. The cost was a deterioration of public finances. Although these structural changes allowed the unity of the functions of money to be maintained even under accelerating inflation, it will be claimed that the new structure contained the seeds of its own destruction. Thus, the present chapter analyses the processes whereby the above referred changes also undermined confidence in conventions and institutions on which the unity of the functions of money depended, thereby destabilizing the Brazilian high inflation regime.

The most evident disruptive aspect of this new institutional arrangement is the fact that, over the decade, it engendered endogenous mechanisms of inflation accelerating, thereby reproducing and aggravating the problem to which it was at least some kind of solution (section 7.2). This put the role of money as a social operator at stake. Thus, consistently over the 1980s, but especially in its second half, inflation accelerated, the conventions which maintained the stability of the high inflation regime began to fray and further institutional adaptations had to be introduced to contain the disruptive mechanisms of inflation acceleration. By the end of the decade, however, the capacity of adaptation of the high inflation regime was completely exhausted. So much so that it was no longer coping with the pressures inflation acceleration was putting
on contractual arrangements. In this context, private agents were no longer regarding indexed assets as the best alternative way to store wealth; instead, foreign currencies, gold, and real assets began to be demanded as more reliable stores of value. Besides, the daily indexation provided by state institutions was being abandoned and being substituted either by private indexes or by the Dollar variation. In effect, the culture of inflation created over the previous twenty-five years was breaking down and other forms of social structuration were emerging.

It is important to stress, however, that that was not a sudden change of evaluation; instead, the apparent stability of the institutional framework of the Brazilian high inflation regime for most of the 1980s hid its progressive deterioration. To explain that process and therefore to unveil the contradictions of that regime it is important to recall the central importance of state institutions to maintain the unity of the functions of money in Brazil. As the Brazilian high inflation regime was based on the widespread confidence in the stability of those institutions, its deterioration is associated with the weakening of confidence in the State as a social operator. In this sense, to understand the rupture of the Brazilian high inflation regime – which led Brazil to the brink of hyperinflation during the last months of 1989 and the beginning of 1990 – demands the investigation of what caused the gradual loss of confidence of private agents in the capacity of the State to maintain the stability of contractual relations.

Such investigation requires, in turn, the examination of at least two main processes, both associated with the specific forms the high inflation regime adapted to inflation acceleration. Although interrelated, they will be analysed separately, so that a clearer understanding of the collapse of the high inflation regime in Brazil can emerge. Not surprisingly, given the
basic elements of that regime discussed in the two preceding chapters, the relationship between the State and private agents is at the centre of those processes.

The first process which disturbed that confidence was the negative effects of those adaptations on the public finances, for they progressively aroused doubts as to the ability of the government to maintain the stability of the institutional framework of the high inflation regime (section 7.3). The second main consequence of the institutional adaptations was the expulsion of many Brazilian citizens from the space of monetary relations, thereby creating an increasing social and political rejection of that excluding institutional framework (section 7.4). In this sense, it will be argued that the burden of bearing virtually all the costs of sustaining the Brazilian high inflation regime over the 1980s proved to be too heavy for both the State and those excluded citizens. And insofar as their strength deteriorated and finally collapsed, so did confidence in the institutions which maintained the stability of the high inflation regime.

To those major disruptive processes one can add still others which, although not directly linked to the operation of the Brazilian high inflation regime, reinforced its intrinsic fragility. Among these, the most relevant are the recurrent changes in the rules of indexation caused by the several stabilization plans implemented over the decade (section 7.5) and the political instability of the government (section 7.6). As both the economic and political events of 1989 represent the culmination and the disclosure of the hidden contradictions of the Brazilian high inflation regime, they will be analysed in a more detailed way (section 7.7).
7.2 The Acceleration of Inflation

After having reached 100% per year in 1980, inflation in Brazil remained around this plateau until 1982. In 1983 it shifted to another plateau (200% per year) and, for the following two years, persisted at this level. After beginning to accelerate anew, it was drastically reduced (65% in 1986) as the outcome of a stabilization plan adopted in February of that year (the Cruzado Plan). From the beginning of 1987 onwards, however, inflation accelerated steadily until reaching, in 1989, 1,476.6%. Such a trend was only briefly interrupted by two short-lived stabilization plans (the Bresser Plan, in June 1987, and the Summer Plan, in January 1989). Thus, whereas for the first half of the decade the level of the inflationary plateau shifted roughly at each two years, during the second half of the 1980s inflation accelerated continuously. Given this pattern, the understanding of the causes of the behaviour of prices in the Brazilian economy during the decade as a whole can be better achieved by analysing the years 1980–85 and 1986–89 separately.

The causes of the acceleration of inflation in the first half of the decade are undoubtedly linked to the response of the government to the external crisis which emerged in 1979, to the adjustment policy adopted in the early 1980s and to the reaction of the private sector to that policy. Firstly, as viewed in chapter 5, the maxidevaluation (30%) of the Cruzeiro in 1979 suddenly increased the prices of imported goods and of the domestically-produced tradable goods, especially primary inputs; as a consequence, the primary costs of domestic production rose. Besides, as the maxidevaluation of the Cruzeiro increased interest charges on Dollar-denominated liabilities in terms of national currency, indebted agents had their total costs increased and, consequently, their gross profit margins squeezed (Carneiro, 1991: 202). The increase in interest
rates from the beginning of the decade, in turn, provoked an additional elevation of financial costs, which further compressed gross profit margins. The large private companies' reaction to this new situation was to raise their mark-ups, thereby passing the costs of the adjustment policy on to the rest of society. Moreover, the rupture of the rules which regulated those variables increased the uncertainty concerning their behaviour in the future (and therefore the evolution of the primary and financial costs in the future), thereby prompting those companies to increase their mark-ups preventively (ibid.: 202-3).

In sum, the changes brought about by the policies implemented in the early 1980s in response to the financing crisis provoked an increase in mark-ups of the large private companies, which were those who possessed the market power to do so even in a recessionary environment. However, in a highly indexed economy, that initial increase was promptly passed on to other segments of the economy, thereby creating price rise feedbacks and the maintenance of inflation at a new and higher plateau. That is, as the indexation of the economy caused relative rigidity in relative prices, it quickly conveyed located inflationary impacts throughout the economy.

Similarly to what happened in 1980, when inflation rose to the 100% per year plateau, the shift from this level to the 200% plateau reflected the maxidevaluation (30%) of the Cruzeiro in 1983 and the renewed increase

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1 The instability of interest rates and therefore the increase in the degree of uncertainty concerning their behaviour in the future was also the consequence of the expansion of the domestic public debt and the associated pressure to further raise domestic interest rates in order to finance it. For a detailed analysis of these indirect effects and the articulation between the external crisis and the destabilization of expectations concerning the evolution of both the exchange and the interest rates, see Tavares and Belluzzo (1986).

2 This power was still compounded by a decline in the import coefficient and therefore by the reduction of external competition during the period (Carneiro, 1991: 204).
both in direct costs and in the degree of uncertainty concerning the
behaviour of some crucial prices in the economy (exchange rates and
interest rates) in the future. Once again, the largely adopted mechanisms
for the indexation of prices to past inflation kept inflation rates at
higher levels. Thus, the behaviour of inflation in the first half of the
1980s can be explained by a combination of two factors. First, it was due
to the occurrence of two external shocks and the response of the government
to them, which, through their direct and indirect effects, caused the
acceleration of inflation in 1980 and 1983. Second, it came about due to
the mechanisms of indexation of the high inflation regime, which spread the
effects of the shocks throughout the economy and perpetuated inflation
rates at the higher levels.

Between 1986-89 inflation accelerated steadily, being only briefly
interrupted by the temporary success of stabilization plans, which
subsequently failed in their objectives. There are several facts which may
explain that acceleration. First, the virtual cessation of new external
financings provoked a permanent fear of another maxidevaluation to
guarantee the generation of large trade surpluses. Second, the increase in
the domestic public debt had become a permanent and autonomous pressure for
raising domestic interest rates. These two elements were strong enough to
prompt large firms to raise their mark-ups preventively, therefore
accelerating inflation. Besides these motives, the aggravation of the
public finances progressively engendered an extra source of instability and
therefore new mechanisms of inflation acceleration. According to Kandir
(1988: B2), the gradual deterioration of the government accounts initiated
in the early 1980s provoked the "public sector financial fragility", a
concept that reflects the inadequacy between the trend for the expansion
of the public sector endebtedness and the exhaustion of the government
financing pattern. Put another way, the response of public and private agents to the financing crisis initiated in 1979 - in which the former assumed the costs of the adjustment and the latter transmuted from debtors to creditors of the financial system - created a situation in which the government had no alternative to finance its deficits but to increase its own debt. And as the public sector financial fragility increased, doubts about which fiscal measures could be taken to compensate for this fragility also emerged.

Among the possible measures that the government was expected to take to alleviate its situation were an increase in taxes, a rise in the price of goods and services produced and commercialised by the public sector, and the reduction of subsidies. Faced with this potential threat, those groups which made significant use of those goods and/or would be heavily affected by a reduction in subsidies or increase in taxes tended to increase their mark-ups speculatively. In a highly indexed economy, these rises were quickly spread throughout the economy and inflation accelerated. The acceleration of inflation, in turn, put stress on the financial position of the public sector, thereby aggravating its fragility and, consequently, increasing the importance of the expectational component of prices (ibid.). Thus, as opposed to the preceding period, in the second half of the decade the acceleration of inflation was mainly provoked by endogenous mechanisms linked to the aggravation of the financial crisis of the State. Moreover, and similarly to the first half of the 1980s, the mechanisms of indexation spread and maintained the effects of that acceleration in inflation over time. In this sense, one can say that, besides propagating inflation, the specific way the Brazilian high inflation regime adapted to the rise of inflation engendered, over the years, mechanisms of inflation acceleration.
7.3 The Deterioration of the Public Finances

The first mechanism of deterioration of the capacity of continuous adaptation of the Brazilian high inflation regime to be discussed relates to the effects of that adaptation on public finances. To maintain the attractiveness of government bonds and therefore to finance its recurrent deficits in a situation of inflation acceleration, the government had no alternative but to reduce the maturity of indexed government bonds and to increase the premium attached to their holding. As a consequence, there was a sustained increase over the decade in the preference of the private agents to use either indexed government bonds or government bond-based applications as store of value. The counterpart of that process, however, was that there was a progressive shortening of the domestic debt of the public sector and an increase in its costs. That is, the increasing preference for those assets as a store of value implied the progressive financial fragility of the public sector.

As this process evolved over the years, it became evident that the government would have to do something to alleviate the costs of its debt. And the uncertainty concerning the fiscal measures likely to be taken in the future caused, as discussed above, the endogenous acceleration of inflation. By the middle of the decade, however, the deterioration of public finances worsened to such an extent that even the reliability of government bonds as a store of value commenced to be questioned. That is, there was fear that the government would no longer guarantee the convertibility of government bonds into the national currency at the terms agreed. And the clearer the perception of that risk the less the willingness to keep these bonds as store of value. To continue to finance

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3 In terms of the discussion undertaken in chapter 3, one can say that that process disrupted the price norms which served as a guide for the agents to form their expectations concerning the value of government bonds.
its deficits, therefore, the government was forced to offer still higher rates of interest for its highly liquid bonds, which only aggravated the disruptive effects just mentioned. Thus, because those institutional modifications concealed the tension between the financial fragility of the government and the perception of the private agents about such fragility they continuously aggravated the profile of the public debt.

This process led to the progressive annihilation of the belief in the capacity to pay of the government. Eventually, a point was reached in which the doubts concerning the future capacity to pay of the government were big enough to discourage private agents from continuing using government bonds as a reliable store of value. Put another way, a point was reached in which fears concerning the potential actions the government would have to take to tackle its financing crisis were big enough to divert private agents from buying government bonds, regardless of how high interest rates were. In this context, confidence in the stability of the process of convertibility between some of the most important instruments which performed the store-of-value function and the legal means of payment were destroyed.

The fear that the government would have to do something to alleviate the burden of its debt also caused the erosion of confidence in the relation of representativeness between the amount of means of payment actually delivered to discharge indexed contracts and the magnitude of the transfer of purchasing power agreed when the contract was established. That is, there was an increasing distrust in the accuracy of the official index, for it was feared that the government would manipulate it in order to reduce the real value of its indexed debts. As a matter of fact, official inflation indices had been explicitly manipulated in Brazil from time to time at least since the 1970s. Thus, despite the monthly and, afterwards,
daily indexation, the rapid acceleration of inflation and the associated deterioration of public finances aroused doubts about the capacity of the official index to compensate for losses. Such doubts were not placated even with the adoption, in 1989, of the index itself as the legal standard of value. As a result, there was a gradual rejection of the official index and private indices (which were believed to reflect inflation more accurately) or even the Dollar began to be used as standards of value.

On the one hand, then, there was a gradual rejection of the monetary instruments which had performed the standard-of-value and the store-of-value functions of money in the previous decades. On the other hand, there was the simultaneous adoption of several other instruments (e.g. Dollar, gold, private indexes) which were intended to substitute for the abandoned ones. Moreover, due to the instability of the terms of convertibility between the newly adopted instruments and the national currency, by the end of the decade the national currency began to be rejected as a means of payment as well.\footnote{That rejection was notably evident in transactions of houses, second-hand cars, jewels, etc., which could more easily evade the official prohibition of using any instrument to settle contracts other than the national currency and use the Dollar instead. However, given the small size of the Dollar market in Brazil, that behaviour could not be largely adopted in the economy, regardless of the gravity of the monetary crisis. The most likely outcome would be the progressive paralysis of the productive process and an increase in speculative activities.}

Thus, one can say that the way the institutions of the Brazilian high inflation regime adapted to inflation acceleration possessed internal contradictions which were gradually leading to their own exhaustion. That is, the institutional apparatus which preserved the unity of the functions of money during the 1980s engendered processes which undermined the conditions necessary for its existence. In the centre of these contradictions was the fact that, although temporarily maintaining
confidence in the stability of the high inflation regime, those arrangements caused the gradual deterioration of public finances. This, in turn, provoked both a gradual disbelief in the capacity of the government to honour its debts in the terms agreed and the loss of credibility in the index used to correct the nominal values of contracts. As the maintenance of money as a social operator depended on the unchallenged confidence in those relations of convertibility and representativeness, the crisis of public finances both sustained and ultimately destroyed the unity of the functions of money. In this sense, the same mechanisms which preserved the unity of the functions of money at the micro level for most of the decade progressively undermined it at the macro level. That is, whereas for each individual producer the real value of both their monetary contracts and their liquid wealth was being preserved, the conditions for maintaining it for the society as a whole were being exhausted. Similarly, one can say that the same mechanisms which preserved the unity of the functions of money in the short term, gradually undermined the conditions for maintaining it in the long term. This demonstrates the contradictory duality of the institutions of the Brazilian high inflation regime: while providing the necessary (although not sufficient) conditions to conciliate individual interests with social needs, they eventually destroyed the widespread confidence required for their existence.

7.4 The Excluding Character of the Brazilian High Inflation Regime

The second process which undermined the confidence in the State as the guarantor of the stability of the institutional framework of the high inflation regime was also a result of the way that framework adapted to inflation acceleration. At its basis is the fact that those institutional adaptations provoked the expulsion of many Brazilian citizens from the
space of monetary relations. That is, the fact that even at the micro level the unity of the functions of money was not being maintained for all private agents. This expulsion occurred in two distinct forms.

In the first, the expulsion was both partial and gradual, and affected those low-income workers who did not have full access (if any) to the mechanisms which preserved private wealth under high inflation. That is, it refers to the fact that the institutional adaptations of the Brazilian high inflation regime did not occur at the same pace and in the same manner for all contractual relations. In fact, the maintenance of the unity of the functions of money was being fully achieved only for part of the private agents; i.e. for those entrepreneurs and high-income workers who could have access to government bond-based financial applications and whose contracts were fully indexed to past inflation and readjusted at short intervals.

The contracts which had their indexation periods more quickly and effectively reduced were those indexed to the exchange rate. This was so because, as the government was committed to generating large trade surpluses, it had to favour export activities. To accomplish this need, the periodicity of the minidevaluations of the Cruzeiro against the Dollar was gradually reduced until - in the mid-1980s - they were effected on a daily basis. As a consequence, government bonds indexed to the exchange rate became much more attractive as an instrument to be used as store of value than those indexed to past inflation (Camargo and Ramos, 1988: 14). In order to avoid a flight of resources from the lengthier IGP-based applications in search of the shorter Dollar-based applications, the government also reduced the indexation period of the former, first to a monthly basis and, subsequently, to a daily basis. Accordingly, both exporters and those entrepreneurs with large portfolios required to gain
access to government bond-based financial applications had their wealth fully indexed to past inflation and corrected at very short intervals. For those individuals who could not afford to part temporarily with the amounts required to have access to those applications, there was always the alternative of savings deposits and, later in the decade, of short-term funds. Although savings deposits did not provide a remuneration as high as that offered by the government bond-based applications, access to them was much less restricted than the latter and they had their indexation period reduced to one month. In contrast, the government introduced no mechanism to compensate for the loss of average real income the acceleration of inflation caused to those who depended mostly on their wages as the main source of income and could not afford to spare part of them to apply in savings deposits or in short-term funds.

Thus, whereas entrepreneurs and high-income workers had the nominal value of both their indexed income flows and their accumulated wealth corrected every month or even every single day, no such similar facility existed for low-income workers. All that the government conceded was to reduce, in 1979, the adjustment period for wage indexation from one year to six months. Evidently, such divergence in the terms of the indexation period implied the existence of distinct degrees of protection against inflation. It was only after several strikes and long-term negotiations that workers succeeded in obtaining, first, tri-monthly and, by the end of the decade, monthly correction of their wages according to past inflation. Yet even when the index employed to correct monetary contracts was the same and the indexation period levelled, the alternatives to keeping one's wealth protected against the devaluation that the rise of inflation provoked were not equally available to all private agents. That is, because of the very restrictive conditions in terms of minimum amounts required for
applications, low-income workers had no access to the indexed financial applications and, therefore, could not index the value of their liquid wealth to past inflation. Obviously, these inequalities in the institutional framework on which the unity of the functions of money was based contributed to the worsening income concentration in the Brazilian economy over the 1980s.

As a consequence, the maintenance of the unity of the functions of money was being achieved only for part of the private agents. For exporters and for those who had access to government-based applications or at least to savings deposits, it was possible to maintain the real value of liquid wealth over time and to convert it in terms of the national currency whenever necessary without incurring any significant loss. Similarly, the spreading of indexation and the shortening of the indexation period allowed frequent corrections of the value of the monetary contracts and, therefore, their discharge through the delivery of an amount of the national currency which corresponded to the wealth promised to be delivered when the contracts were established. For those agents, the institutional adaptation undertaken in the first half of the 1980s created the conditions for maintaining the unity of the functions of money.

For most low-income workers, however, such unity was broken. There was no way of keeping their liquid wealth protected against inflation acceleration, for the minimum amounts required to keep one's wealth in terms of the fully indexed financial instruments (mainly government bond-based operations and savings deposits) were incompatible with the amounts they could spare. For those who had to live without protective devices against inflation acceleration, therefore, the only monetary instrument to which they had access was the "battered" and permanently devalued national currency. However, under high and rising inflation the national currency
could no longer perform the store-of-value function. In this way, the national currency represented, for the excluded citizens, an unattainable object of desire, for, when held, it was almost instantaneously pulverised by inflation, forcing its transient owner to look continuously for more of it, only to see it disappearing again. Similarly, as the indexation period of their wages was much longer than that of most of other contracts, there was both an absolute and relative loss of their average real income over time. Therefore, because of the biased form in which the institutional changes were carried out, only a fraction of private agents could trust in and depend on monetary and financial instruments to establish contracts over time. In this sense, the unity of the functions of money was only partially maintained and money's role as a social operator severely damaged.

In its second form, the expulsion of Brazilian citizens from the space of monetary relations was both complete and immediate, through unemployment. Unemployment was an outcome of the adaptation of the high inflation regime in the sense that this adaptation created stable and risk-free conditions for the reproduction of private wealth outside the productive sphere; i.e. in the financial circuit. Thus, the same institutional changes that maintained the capacity of money to act as a social institution, discouraged, paradoxically, private agents from actually using money as such. As a consequence of this gradual rupture between the channels to reproduce private wealth and those to generate social wealth, workers were dislodged from their jobs.

These two forms of disenfranchisement and social segregation indicate that money was being maintained as a social institution at the expense of the gradual exclusion of the poorest Brazilian citizens from the sphere of monetary contractual relations. As a consequence of this segregation of
social groups — mostly the unemployed and the low-income workers — there was, for the excluded, an appalling deterioration of the trust in the possibility of social ascension and in the whole notion of society over the 1980s. In fact, for these agents who were being consistently pushed aside the sphere of monetary relations, the high inflation regime had already collapsed and they were already living under hyperinflation. Thus, one of the basic features of the Brazilian high inflation regime during the 1980s was the fact that, to sustain money as a social institution, a significant portion of the population was disenfranchised, thereby reducing the scope of the society for which money provided coherence. In other words, trust in the relations of representativeness and convertibility between the instruments which performed the functions of money was preserved through both the contraction of the space of circulation of money and income concentration. However, as the unity of the functions of money was maintained precisely for those agents who command the productive sphere, money continued to act as the fundamental institution which makes the generation of private wealth (profits) and social wealth (income and output) potentially compatible processes. It is in that specific and restricted sense that, despite the increasing inequalities and injustices provoked by the way the adaptations of the high inflation regime were undertaken, money was maintained as an element of social cohesion for most of the rest of the decade.

It must be clear that one is not proposing to explain the excluding character of the Brazilian social structure through the characteristics of the high inflation regime alone. In fact, the basic inequalities of Brazilian society could only be explained in a much more comprehensive analysis, which took into account the pattern of development which evolved since the abolition of slavery and the beginning of industrialisation in late 1800s. What the features of that regime add to those long-standing inequalities is the exclusion of the poorest citizens from the space of monetary relations on a scale not seen since that period, which marked, instead, the beginning of the gradual inclusion of ex-slaves into that space.
The disfranchised agents (both the unemployed and low-income workers) were forced to search for alternative forms of preserving their wealth outside the formal monetary system. Similarly, their individual material reproduction as human beings had to be achieved through alternative mechanisms other than through the establishment of monetary contracts. Those who could count on either professional or solidarity links, such as trade unions, community organizations, friendship or relations, developed primitive credit systems or barter mechanisms. Although those extra-market links had always performed a very important role in cementing Brazilian society, the crisis of the 1980s made this alternative to impersonal monetary relations still more crucial for the survival of those excluded. However, despite being reasonably effective for particular groups, the existence of these schemes is also an expression of the deterioration of the role of money as a social operator. Instead of being mediated by monetary relations, the conflictive search for the attainment of private desires was being progressively mediated by the inherently unstable direct confrontation between groups and individuals. And as

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6 One of the more common ways of doing that was through the so-called cadernetas (notebooks), which was a rudimentary credit system used by poor workers to buy food and other basics in local groceries. From the beginning to the end of a month, the values of the goods bought by each individual were written down by the vendor in a caderneta. By the end of the month, when the workers received their wages, they immediately paid their debts off and started the process again. For the workers, this system was a form of avoiding the devaluation of their wages over the month. Even if the prices of the basic goods in these stores were consistently higher than those found in supermarkets, the possibility of concentrating their expenses at the end of the month more than compensated for the difference in prices. For the groceries' owners, in turn, this was the only way of competing with the supermarket chains and surviving amidst the crisis.

7 According to da Matta (1993: 27), the material expulsion of the poor from the space of monetary relations causes both the psychological rejection of money (an exacerbation of the popular saying: "money does not bring happiness") and the valuation of other elements of socialization (e.g. family, friendship, politeness) which would bring "real" happiness to those excluded.
inflation accelerated, the conflicts engendered by contractual relations based on extra-market social links inevitably erupted and undermined even the professional and solidarity links on which those schemes depended, thereby preventing the excluded individuals from having access to those alternative forms of survival outside the space of the monetary relations. Put another way, as the individuals expelled from the space of monetary relations were forced to rely exclusively on the limited capacity of the "relational" links for placating the violence inherent in non-monetary market relations, there was a gradual erosion of those solidarity values and an exacerbation of individualism in society. In this sense, one can say that the adaptations of the Brazilian high inflation regime also engendered an ethical crisis in society.

However, the worst was reserved for those who could count on neither the professional nor the solidarity support. For them, the only alternatives left were illegal activities such as theft or drug trafficking. And as the crisis worsened more and more individuals were forced to opt for those associative and/or individualistic strategies, both of which reinforced the distrust in state institutions as regulatory mechanisms of the market economy. For the excluded, then, the institutions and behaviours of the high inflation regime became both strange and meaningless to their day-to-day experience. The norms and rules which characterized the culture of inflation were progressively regarded as social codes of a society which had expelled them. In sum, unemployment, the impoverishment of the already poor, the pauperization of the middle class, and frustration with the incapacity of the government to reverse the

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8 As Fernandes (1993: 46) points out, inflation acceleration puts excessive pressures even on solid (but unprotected) friendships, thereby corrupting the traditional values which sustain confidence in those personal links.
general decline opened space for the culture of inflation to turn into a "culture of violence".

The main feature of this culture is a generalized view which perceives a violent society as unavoidable and encourages individual violence as the only form of survival for those whom the society is unable to give any hope of attaining their desires. This culture engenders social behaviours which challenge the law and the social ideals, thereby implementing the empire of the outlaw and aggravating, in turn, the whole picture of social decay. Put another way, as the social and economic reality continually reaffirms the superfluousness of entire segments of the society both in economic and moral terms, the excluded individual is led to recognize explicitly his banishment from the society and to behave as a non-citizen. In this way the culture of violence degenerates into the "culture of delinquency", which is the only form the superfluous individual finds to survive socially (Costa, 1989: 133).§

The distrust in the social order engenders its opposite. To disobey the law becomes the law, and the awareness of widespread impunity brushes away from the social imagination any notion of culpability or ethical behaviour.¹⁰ In a context of distrust in social values, these desperate

§ Although from a distinct perspective, da Matta (1993: 28, translated by this author) also proposes a link between the inequalities created by the Brazilian inflation and the culture of violence. For him, after having being deprived of the right to use all the monetary instruments available for other agents, those who do not have "employment, party, trade union or family name" have no alternative but to use the "currency" of physical violence.

¹⁰ Thus, for instance, not only are traffic conventions disrespected, but the consequences of this transgressive behaviour (e.g. to hit another person with a car) are discounted as well. Similarly, looting supermarkets is no longer regarded, by those excluded, as a violation of property rights; it is simply the only way of having access to food and other essential (and also non-essential) goods. To pay taxes, in turn, becomes a reason for mockery and the defiance of state bureaucracies a way of finding the identity which is denied by the society.
Attempts at affirming individual identity lead not to reform but to the denial of the way modern economies are structured. All regulatory institutions and conventions are contested by the excluded individuals, for they are viewed as the more visible aspect of a social structure which does not care for their future. Moreover, and according to its own nature, this rejection of social institutions is not undertaken in an organized and collective way, but carried out through fragmented discourses and actions. Yet despite its individualist origin, the culture of violence and delinquency is quickly absorbed by the society as a whole, even by those who have not been affected by the gradual destruction of money as a social institution. Those who are not excluded may not join in the despair of the excluded, but they still play their part, by creating both moral and material defences against the excluded.

At the centre of this repudiated sphere, one finds the State and its institutions. For the excluded ones, state institutions are progressively deprived of any social meaning, for they are viewed as regulators of a social space (the space of the monetary contracts) to which they no longer belong. The non-excluded ones also lose their confidence in the State as a social operator, for its impotence to restrain the generalized violence of the society is more and more evident. In this context, distrust in the ability of the State to maintain a space of socialization is generalized and pervades all its institutions, including those which regulate the relations of representativeness and convertibility between the instruments which perform the functions of money.

Those excluding mechanisms only reinforce the contradictory duality of the Brazilian high inflation regime. To maintain money as an element of

As da Matta (1993: 25) argues, it is difficult to preserve confidence in social norms when there exists the widespread perception that these norms only benefit certain groups of agents.
social cohesion, the institutional adaptations carried out over the years provoked the progressive disenfranchisement of part of the population. This process, in turn, engendered a culture of violence, in which the codes and rules which maintained the unity of the functions of money for the non-excluded were gradually being ignored and/or challenged. By ignoring and/or challenging the state institutions, the culture of violence further undermines the capacity of the State to reform and regulate the institutions which maintain the unity of the functions of money. As a consequence, if the progressive deterioration of that unity (or, alternatively, its maintenance only for a limited and decreasing number of citizens) contributes to the creation of the culture of violence, this, in turn, makes the maintenance of that unity, even for the non-excluded citizens, increasingly more difficult. In this sense, the emergence of the culture of violence unveils the contradiction between reducing the space of monetary circulation (or, alternatively, reducing the portion of the population which participates in monetary contracts) and maintaining the institutional character of money. Moreover, the belief in the effectiveness of the State becomes progressively more difficult to rebuild, for the society as such is disintegrating and, although anarchically and violently, new forms of socialization are being looked for outside the influence of the State.

7.5 The Failure of the Stabilization Policies

Several stabilization policies were adopted during the 1980s in order to stop the acceleration of inflation and its disruptive effects. During the first half of the decade policy-makers favoured recessionary measures to bring prices down, which was in accordance with the need to reduce the domestic absorption of output and to increase trade surpluses. In the
second half of the 1980s, in turn, stabilization policies assumed the form of much more comprehensive plans. These were intended to change some of the institutional features of the economy regarded as responsible for the acceleration of inflation (e.g. indexation). Although briefly stopping the rise of prices, none of them succeeded in their ultimate objectives. Still worse, their failure to do so further compounded the loss of confidence in the State as the guarantor of the institutional apparatus on which the unity of the functions of money was based. It is in that double perspective that the stabilization plans will be analysed here.

In the first half of the 1980s the main goal of the government was to generate large trade surpluses. Thus, the control of inflation had to be somehow made compatible with and submitted to that objective. Inevitably, contradictions emerged and the control of inflation had to be renounced. The most illustrative moment of the failure of the recessive measures both to control inflation and to generate trade surpluses is 1983. This was when the government had to decree a maxidevaluation of the Cruzeiro to stimulate exports. Although successful in this particular objective, the domestic impact of the maxidevaluation doubled inflation. In response to that, the government decided to expurgate the monetary correction as an attempt to control inflation. That is, similarly to what had happened in 1980, the calculation of the index employed to correct indexed financial applications and monetary contracts in general was modified by the government. Instead of correcting the values of those contracts according to the inflation of the preceding month, they would be adjusted according to the moving average of the three previous months. In a context of rising inflation, the private agents' response was the migration of resources from government bond-based applications to financial assets attached to flexible interest rates and to speculative markets. The
disorganization of the financial markets that ensued and the need to comply with the requirements of stability the IMF was imposing in order to negotiate Brazil's external debt forced the government to reverse its decision. Thus, the remuneration of government bonds was again equalled to the variation of the exchange rate (which followed the domestic past inflation), which, given the need for generating large trade surpluses, was the most reliable index to be employed for maintaining the real value of the private wealth over time.

However, as inflation continued to accelerate something different had to be done to stop the disruptive effects of the rise in prices. Accordingly, in 1986 the so-called Cruzado plan was adopted. At that time inflation had already surpassed 15% per month, output growth rates were near zero and there was disorientation about the real content of nominal contractual relations. As a consequence, the institutions of the high inflation regime were in the brink of collapse. As the policy-makers diagnosed the main cause of inflation as the inertia caused by the then generalized indexation (it was implicitly assumed that the external situation and the public deficits were under control), the plan was centred on deindexing the economy. To do so a new currency (Cruzado) was introduced in substitution for the Cruzeiro and formal indexation was made illegal. In addition, a generalized price freeze (including the exchange rate) prevented the informal indexation of profit margins (Feijó and Carvalho, 1992: 117).

Although succeeding in bringing inflation down to very low rates for the ensuing ten months, by the end of the year inflation accelerated again. There are two main reasons for that failure. The first relates to the magnitude of the stock of highly liquid non-monetary assets which served as store of value for private agents. In February 1986, on the eve of the
implementation of the plan, government bonds kept by private agents represented more than three times the value of M1. If one includes the not much less liquid time and savings deposits in the total of non-monetary assets, its magnitude at that moment rises to an amount more than eight times the value of M1. When inflation is suddenly reduced in the presence of such a relatively enormous stock of highly liquid non-monetary assets, at least part of those assets will be expected to be diverted into real asset markets. Thus, in the aftermath of the Cruzado Plan, a significant part of the wealth allocated to the most liquid financial assets was converted into the legal means of payment and subsequently used to buy real assets. Even if part of the wealth so spent is actually converted back into those assets by the sellers of real assets, the temporary flight of wealth from highly liquid applications and the increase of demand it causes through its passage to real asset markets is sufficient to increase their prices (Eduardo Carvalho, 1992a: 164).

12 According to Eduardo Carvalho (1992a: 129–30), there are at least four reasons which, in isolation or jointly, may lead to this diversion occurring. The first is provoked by money illusion, which makes the abrupt fall of nominal interest to be regarded as a real loss. The second refers to expectations and/or risks of the return of inflation, which raise doubts as to the fairness of current interest rates. The third springs from the fact that highly remunerated financial applications are sometimes regarded as a hedge against the variability of relative prices under high inflation and when inflation falls there is no more need to protect wealth in such a way, thereby liberating resources to be applied in real assets. The fourth reason, finally, alludes to the fact that the simple existence of a large and highly liquid stock of financial assets leads those who possess and/or produce real assets to raise their prices even before any actual rise in the demand for them, which would, in turn, increase the interest of agents who see in this move an opportunity to make speculative gains in the future.

13 Thus, whereas M4 remained relatively constant over 1986, M3 decreased its participation in the total of financial assets from almost 90% in February to 70% in December and M1 increased its participation from 11% in February to 29% in December.

14 For example, both industrial production and retail sales increased steadily in the aftermath of the plan, which indicates the existence of a pressure for price rises in those sectors, which was not effected because
The second reason relates to the fact that, despite having being disregarded in the implementation of the plan, the need to finance both the domestic public deficit and the service of the external debt was still present. As a consequence, it was understood that the government had to continue to make their bonds attractive to private agents, which aroused uncertainties about the behaviour of interest rates in the future. In this sense, some of the institutions of the high inflation regime were left untouched by the stabilization plan. Besides, the overheating of the domestic economy led to an increase in imports and, in a context in which the exchange rate was frozen, to a decline in the trade surplus. This created a shortage of foreign currency for the government’s servicing of the external debt. Accordingly, international currency reserves fell to very low levels and doubts arose concerning the measures the government would take to overcome this problem.\textsuperscript{15} Put another way, some of the elements which had been causing inflation to accelerate before the implementation of the plan were not only still present but were further aggravated as they had been overlooked in both the conception and the implementation of the plan.

These distortions favoured the emergence of black markets, encouraged the hoarding of speculative inventories in goods and increased an already strong pressure against the price freeze. In response to that, the government attempted to reduce aggregate demand via a large increase in taxes, which further distorted relative prices and made the maintenance of the then prevailing price freeze. In markets not subject to the price freeze, in turn, such pressures were actually transformed into price increases. Accordingly, the price of telephone lines more than doubled between February and June 1986 and the price of new flats almost doubled during the same period.

\textsuperscript{15} Actually, in the beginning of 1987 the government had no alternative but to suspend part of the service payments of the foreign debt.
the price freeze unsustainable. From then onwards, the situation deteriorated rapidly, inflation began to accelerate once again and indexation had to be reintroduced to maintain the unity of the functions of money.

Thus, although the Cruzado Plan rightly attempted to neutralize the mechanisms of reproduction of inflation (indexation) it neither took into consideration the potential pressure on the real goods markets implied by the existence of a huge stock of highly liquid non-monetary assets nor dismantled the endogenous mechanisms of inflation acceleration. These were the contradictions which once again led to the acceleration of inflation and to the re-introduction of indexation as a form of temporarily restoring the unity of the functions of money. In other words, the plan failed because it abolished one of the institutional devices of the high inflation regime (indexation) without attacking the ultimate causes of inflation acceleration. If inflation were to be controlled and the unity of the functions of money maintained over time, both had to be dealt with simultaneously, which would require the resolution of the recurrent domestic deficits (a fiscal reform), the elimination of the pressures provoked by the external debt (a renegotiation with the foreign creditors) and a reduction in the degree of liquidity associated with the stock of non-monetary financial assets (a renegotiation with the domestic creditors).

Besides these institutional modifications, a lasting stabilization of the Brazilian economy at that moment would also have required some behavioural changes, so that resistance against the abolition of the unequal nature of the high inflation regime could be won over.\(^{16}\) It was

\(^{16}\) That resistance refers basically to the fear of having to deal with a new set of codes and rules in a stable economy. Although this conservative behaviour is much more manifest in those social segments which
thought that these changes could be imposed by the government through the use of coercive mechanisms, for the fear of punishment would end up undermining any conservative views regarding the institutions of the high inflation regime. Accordingly, it was expected that the use of force by the State would induce private agents to change their behaviour in a way that the new institutional framework would gradually be deemed as more stable and reliable than the previous one. As a matter of fact, both the prohibition of formal indexation and the price freeze decreed in February 1986 had a very strong coercive component, for those who disrespected it could be fined or even sent to prison. However, recalling the analogy between money and language made in chapter 3, it must be pointed out that there are limits to changing rules in any monetary or linguistic system without risking disrupting it as well. These limits are given by the capacity for absorption of such innovations by society. Thus, measures intended both to introduce a new currency and to improve the confidence of the agents in the use of a new set of monetary instruments must respect the degree of adherence of the agents to existing conventions regarding the operation of the monetary system. Otherwise – and regardless of any coercive mechanism – they will sooner or latter be rejected by society.

Not surprisingly, then, the measures taken by the government in the Cruzado Plan did not erase the previous institutional framework from people's memories. Instead, they were only temporarily repressed and reemerged as soon as the failure of the plan to tackle the major causes of inflation became clear. Only if a general aversion to that framework

benefit from the inequalities of the high inflation regime, it is, after several years of hard apprenticeship in learning to live with inflation, found almost anywhere in the monetised sector of Brazilian society.

17 The need and the importance of coercive actions to change behavioural patterns in the context of stabilization policies is defended by Abranches (1993: 92).
already existed or if a broad political compromise for its abolition had been previously reached could the coercive mechanisms have succeeded in restraining people from informally reindexing their contracts to any available index (e.g. the variation of the Dollar in the black market) or raising their prices. In this sense, one may say that coercive mechanisms will only succeed as regulatory instruments of new behavioural patterns if they are employed as supportive rather than as mandatory instruments.

During the first half of 1987 inflation accelerated steadily: from 15% in March to 20% in April and 27% in May. In June the incoming Minister of Finance announced a new plan bearing his name, the Bresser Plan. It was centred on a new price freeze and on the control of aggregate demand through the adoption of tight fiscal and monetary policies. Once again, therefore, the inertialist diagnosis of the causes of inflation prevailed in the elaboration of the plan. The plan did not succeed in keeping inflation rates to low levels. After falling to 4.5% in August, inflation rates were already 14.5% in November and indexation had, once again, to be adopted. The reasons for the failure are diverse. Firstly, the necessary fiscal and monetary austerity measures met strong resistance within the government itself. Secondly, an increase in production costs – despite the price freeze – caused imbalances in relative prices and "signalled that the freeze could not last, triggering speculative movements in stocks of commodities" (Feijó and Carvalho, 1992: 119).

In contrast to the Cruzado Plan, in the aftermath of the Bresser Plan there was neither a significant shift of wealth from M3 to M1 nor a relevant rise of prices in real asset markets. The non-occurrence of those disruptive effects was probably due to the low level of activity of the economy at that moment (Eduardo Carvalho, 1992a: 160). However, as the institutional framework of the high inflation regime was only half-
reformed, the accelerationist component of inflation (based on the progressive loss of confidence in the capacity of the government to guarantee the liquidity of public bonds over time) prompted leading enterprises to raise their mark-ups speculatively. In a situation of return to generalized indexation clauses, the rise in inflation was inevitable. Thus, the main cause of the return of inflation was the inadequacy of the scope of the measures taken to tackle inflation in regard to the nature of the inflationary process.

However, an additional element which contributed to the failure of the plan and which would henceforth be a permanent obstacle to new attempts to stabilise the economy was the widespread distrust in the capacity of the government to control inflation. As the failure of the Cruzado Plan had caused a great deal of frustration and disappointment, there was general scepticism as to new attempts to stabilise the economy using similar devices. Thus, although inflation had been kept at low levels for some months after the Bresser Plan, this positive result was widely viewed as transitory and due uniquely to the price freeze. Accordingly, expectations of future inflation were mostly unchanged and the perception that prices would soon rise again prompted the return of defensive behaviours, such as the adoption of indexation practices and the rise in mark-ups.

In this context, a new Minister of Finance opted for the adoption of rigid fiscal and monetary measures to control inflation. Actually, by so doing he succeeded in maintaining inflation around 20% per month for the first six months of 1988, at the expense of depressing still further productive activities. From July onwards, however, inflation accelerated again, reaching 36% in January 1989. A new stabilization plan (the so-called Summer Plan) was then adopted, whereby a new national currency (Cruzado Novo) substituted for the Cruzado. The Summer Plan included a
price freeze as one of its main components to dismantle inflationary expectations and once again did not tackle the question of the public sector financial fragility. Thus, the huge stock of highly liquid public bonds (which was the expression of the magnitude of the public debt) remained both as a potential threat of a sudden flight of financial wealth towards real asset markets and as the feeder for the endogenous acceleration in inflation. The main difference between the Summer Plan and its antecedents was the very strong role which monetary policy played in its implementation. As a way of both repressing inflationary pressures provoked by the inevitable increase of demand which follows a sudden and drastic reduction of inflation and reversing the pessimistic expectations of the agents about the resoluteness of the government to fight inflation, interest rates were set at very high levels. As a consequence, however, and besides not solving the main component of inflation (the expectational rise in mark-ups provoked by the public sector financial fragility), the plan caused a further deterioration of the public finances, thereby increasing the financial fragility of the government and the agents' fear concerning its future actions to tackle that fragility. Thus, mark-ups were further raised speculatively and inflation accelerated again.

In sum, the sequence of stabilization plans adopted in the second half of the 1980s failed because they did not promote the institutional changes necessary to stop inflation acceleration and to renew the confidence of private agents in the mechanisms of convertibility and representativeness between the instruments which performed the functions of money. However, they were not only unable to do so; actually, they worsened the financial fragility of the government and, given their recurrent failures, undermined the confidence in its capacity to control inflation. In this sense, one can even say that through successive (failed)
attempts to control the sphere of contractual relations, the government, paradoxically, further deregulated and disorganised that sphere. That is, as the "regularity of the arbitrary behaviour" of the government weakened the confidence in the ability of its institutions to coordinate private behaviour, it undermined the possibility of social order being achieved (Henriques, 1993:58). As a consequence, the fear of the inevitability (sooner or later) of radical actions to solve the much worsened fiscal crisis of the government increased and led inflation to accelerate steadily from 5.2% in April to 37.9% in July 1989, and from 49.4% in December to 71.9% in January 1990.

Moreover, it must be emphasized that those stabilization plans could only have succeeded in the context of cultural transformations which undermined prevailing beliefs and practices associated with the functioning of the high inflation regime, so that any resistance against stabilization could be overcome. However, as discussed above, such behavioural changes cannot be forced into the minds of private agents by decree. Instead, as they imply the abandonment of patterns of socialization, they could only be achieved in the context of either a widespread and autonomous rejection of the institutions of the high inflation regime or a very comprehensive political compromise. For the latter all parts involved would need to consciously decide for a progressive abandonment of practices incompatible with stabilisation and agree upon policing measures to enforce new patterns of behaviour, thereby creating the conditions for the emergence of new cultural values in society. However, and in spite of its deterioration, both the enormous flexibility of the Brazilian high inflation regime and the instability of the political system in Brazil over the 1980s inhibited,

\[18\] Although from a distinct perspective, Earp (1993: 108) also points out the need of cultural changes for achieving a lasting stabilization of the Brazilian economy.
for most of the decade, any generalized rejection — either autonomously created or politically forged — of the beliefs and practices associated with that regime.

7.6 The Political Weakness of the Brazilian High Inflation Regime

There are two political factors which also undermined the confidence in the State as a social operator and, therefore, as guarantor of the stability of the institutions of the high inflation regime. The first relates to the fact that in December 1989 there was the first Presidential election since the military coup of 1964, and that a left-wing candidate who was widely believed to intend implementing radical changes to solve the public deficit after taking office (including a domestic moratorium) was winning all the opinion polls since the beginning of the year. The fear of the losses those changes would cause certainly contributed to the gradual rejection of the agents to continue to accept government bonds as reliable instruments to store value. Even though, as after his defeat and before the new government took office in March 1990 that rejection increased, one must not overestimate the fear of what were presented as left-wing proposals. Actually, there was the gradual perception that whoever won the elections would have to promote radical institutional changes to solve the fiscal crisis of the State, and that most certainly those measures would include some kind of moratorium on the domestic debt.

The second factor reflects the weakening of the political basis of the government during the 1980s. The modern Brazilian republican State presented, between the early 1930s and the late 1950s, a very conservative profile, being politically supported mainly by those entrepreneurs associated with traditional economic activities and by owners of small businesses, which were those who benefited most from the model of
development adopted in Brazil during that period. Although the rapid and concentrated installation of the capital goods industry - initiated in the late 1950s and prolonged until the late 1970s - partially hindered the interest of those supportive groups, the military coup of 1964 and the growth of the economy in the following 15 years accommodated any serious disturbance to the power structure of the Brazilian State. Besides, the rapid growth of the Brazilian economy after World War II allowed the implementation of populist policies, which provided successive governments, until the late 1970s, with the minimum of legitimacy among the poor that even conservative governments need to survive. Obviously, the need for obtaining such legitimacy was much less important after the military coup. It was only with the adjustment policies adopted in the early 1980s that that political support began to be challenged. First because the sector which benefited most from those policies was that composed of the big modern enterprises associated with export activities; the traditional sectors, although possessing the political majority in Congress, were left behind. Moreover, the severe recession and fiscal crisis of the State not only prevented the government from creating compensatory policies (subsidies, tax exemptions, etc.) for those traditional sectors but also provoked an abrupt rise in unemployment rates and a deep cut in already unsatisfactory welfare policies, leaving the more basic needs of the poor (housing, health, education, etc.) unattended (Cardoso de Mello, 1992: 18).

As a consequence of both the exclusion of the groups which composed the political basis of the government from the gains of the adjustment policies and the deterioration of some important social indicators in a moment when the political opposition to the military regime was very strong and articulate, government policies began to suffer resistance from both
the Congress (in which the traditional sectors still controlled the majority of the seats) and the strongest trade unions. In this context, there were severe political reactions throughout the 1980s against any attempt to implement the fiscal measures considered necessary to restore confidence in the capacity of the government to continue to finance itself, for they would further deepen the recession and weaken the economic power of the traditional sectors (via, for example, the reduction of subsidies). This corporate resistance was also reinforced by members of Congress linked to the financial system, which, acting as intermediary between the government and the final buyers of public bonds, was one of the sectors which profited most from the imbalances of the high inflation regime. Thus, the incapacity of the large firms associated with export activities to express their unrivalled economic power also in terms of political representation in the Congress prevented the State from implementing reforms which, although involuntarily, would create some of the conditions for restoring the unity of the functions of money in a way which would not necessarily cause the rupture of the high inflation regime as well. Moreover, the imbalance between economic and political power reinforced, over the 1980s, the idea of the government as a benefactor of some private groups and, as such, unable to preserve social institutions. Put another way, as that split undermined still further the belief in the capacity of the government to oppose to deterioration of the monetary system, it contributed, even if indirectly, to the strengthening of the culture of violence and created obstacles for the construction of the political compromise necessary to implement a long-standing stabilization plan. It is in this sense that one can say that the political instability of the Brazilian government during the 1980s weakened the confidence in its capacity for both macroeconomic and political coordination.
7.7 The Disclosure of the Contradictions of the High Inflation Regime

All these disruptive processes evolved slowly and simultaneously over the decade, so that their destabilizing effects on the state-controlled institutions upon which the unity of the functions of money had been built reinforced each other in a cumulative way. As a consequence, confidence in the conventions concerning the behaviour of those institutions was progressively weakened over the years up to the point of complete disbelief in their endurance. To put it differently, the juxtaposition of those disturbing mechanisms gradually eroded the confidence in the capacity of the State to maintain the stability of the institutional framework which had allowed money, even under high inflation, to be an element of social cohesion.

Yet in spite of their long maturation over the whole decade, it was only in 1989 that the contradictions of the Brazilian high inflation regime became too big to be successfully counteracted or concealed through further institutional changes. Between early-1989 and early-1990 the deterioration of the institutions on which the unity of the functions of money depended achieved its apex, so much so that at the end of this period confidence in the capacity of the State to maintain money as a social operator had virtually vanished. Through the analysis of some aspects of this short interval, then, it is possible to depict the final rupture of the high inflation regime and its virtual replacement by the hyperinflation regime.

That deterioration can be identified in the rejection of two sets of institutions. The first set comprises those mechanisms which permit monetary contracts to be pegged to an index of prices and discharged through the delivery of the national currency. The rejection of those institutions represents the loss of confidence in the stability of the relation of representativeness between the instruments which perform the
standard-of-value function of money and the legally enforced means of payment. The second repudiated set of institutions, in turn, comprises those mechanisms which permit agents to store value in terms of highly liquid, interest-yielding indexed assets (mainly government bond-based applications). The rejection of those institutions represents the loss of confidence in the stability of the process of convertibility of the instruments used to store value into the legal means of payment.

To begin the analysis of the deterioration of the confidence in that first set of institutions chronologically, one must start with the stabilization plan adopted in January 1989 (the Summer Plan). As discussed above, that plan implemented a general price freeze and prohibited formal indexation of monetary contractual values. In order to avoid speculation over the return of high inflation, the plan did not even mention any alternative form of indexation to be adopted at the end of the price freeze. However, and in spite of the sudden reduction in inflation rates (Table 7.1), there was near consensus about the artificiality of the situation, such that soon afterwards the return to high inflation rates was being widely expected. In this context, then, the absence of formal indexation led private agents to look for alternative indices to correct prices, a move which was intensified as expectations of inflation acceleration proved to be true over following months. The index which was soon adopted by entrepreneurs (for inter-firms transactions) as a reliable indicator of real inflation was the then very high interest rates

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19 The only exception was savings accounts, which remained indexed to past inflation. That was a precaution against the possibility of the wealth there allocated to be moved towards consumption.

20 In May 1989, Macrometrica - a well-respected economics consultant - was already forecasting inflation rates of at least 20% in August and 25% in November (Macrometrica, 05.89: 1.1). Actually, however, inflation in June was 26.8% and in July 37.9%.
prevailing in the overnight market (Table 7.1). Wages, in turn, began to be reindexed to past inflation. Even the government, following pressures for the adjustment of the also frozen exchange rates, began to devaluate it periodically according to the variation of past inflation (although using an index different of that used to correct the value of wages) (Oliveira and Biasoto, 1990: 25-6). Diversity was also found as to indexation intervals, which were being reduced accordingly to the market power of the agents. Thus, whereas most firms returned to a pattern of indexation established before the Summer Plan and readjusted their prices weekly or even daily, only then workers began to have their wages corrected monthly. As a consequence of the fact that prices were being corrected by different indexes and using distinct indexation periods, was there a progressive dispersion of relative prices.

To avoid the disorganization of markets and the speculative moves that great dispersions of relative prices cause, the government finally retreated and reintroduced formal indexation in June. From then onwards both the exchange rate and interest rates were to be readjusted according to the daily variation of BTN. Similarly, daily indexation to the BTN was authorised for the establishment of both spot and forward contracts, including taxation. More significantly still, the government made explicit, for the first time, the possibility of employing the index itself (i.e. the BTN) as a standard of value in replacement of the national currency. These measures were an attempt by the government to compel most contracts to be corrected by the same index and to employ the same indexation interval. If

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21 The daily value of the BTN was set by the Central Bank and reflected inflationary expectations for the current month, which were based, initially, on the official inflation for the preceding month. Latterly, it began to include information from several other institutions which also collected prices and commenced to take into account the value of BTN in future markets (Romano, 1990: 58).
successful, this move would allow the national currency to continue to be used at least as a means of payment, for the value of the contracts in terms of it would vary daily according to expectations of inflation for the current month.

Despite formal similarities, the ratification of an index (the BTN) as an alternative and legal standard of value does not imply, in itself, the adoption of an imaginary money similar to those used in pre-modern economies. Whereas the Brazilian government fixed and guaranteed the terms of convertibility between values established in BTNs and the corresponding amount in terms of the enforced means of payment, there was no such guarantee in imaginary money systems. Only if confidence in that relation of representativeness was destroyed would the BTN become an imaginary money and, as such, be totally disconnected from the assets which performed the other functions of money. It must also be noted that those innovations represented the exhaustion of the capacity of adaptation of the high inflation institutions responsible for the stability of the relation of representativeness between the index which corrects the monetary value of the contracts and the legally enforced means of payment. On the one hand, the indexation period was reduced to a daily basis, further reductions posing several technical difficulties in their implementation. On the other hand, the index which corrected contractual values was based not only on past inflation but also incorporated expectations of future inflation as well. However, despite being legally permitted, such innovations were not adopted by all private agents, but only by those with market power to impose those indexation rules on the rest of the society. And even those who adopted them did not do so at once.

After two months of relative stability, prices began to accelerate again from September (Table 7.1). Despite the characteristics of the
indexation system, confidence could not be maintained in the face of high and still rising inflation. Moreover, it increased the fear of the introduction of new stabilization plans, almost certainly including new indexation rules. In this context, abstract and concrete money were no longer regarded as complementary elements of a more encompassing social institution. There was no longer confidence in representativeness between the amount of means of payment delivered to discharge indexed (or BTN-based) contracts and the magnitude of the transfer of purchasing power agreed when the contract was established. Accordingly, now the BTN had become a purely imaginary money. In reaction to the uncertainty concerning possible government actions, there was a tendency to abandon conventional indexation and to adopt alternative indices, which were expected to reflect expectations about future inflation in a more accurate way (Romano, 1990: 55). As a consequence of the anarchical search for more reliable indices, there was a dispersion of prices still greater than that observed in the aftermath of the Summer Plan; this caused an increasing confusion as to the relative values of contracts. In this context, and despite

22 Among the alternative indices in regular use during the last months of 1989 and the beginning of 1990 were the variation of the price of the Dollar in the black market, the price of gold in the futures market and indexes calculated by departments of statistics and economics in universities and research institutes.

23 Relative prices which had been gradually established over the years and maintained even under high inflation because of widespread indexation, began to make no sense at all for Brazilians (or, in fact, for anybody). For instance, in December 1989 one medium-size car (Chevette) cost the same as forty-two medium-size bras and a fridge the same as a linen blouse. Moreover, the same bottle of wine could cost 50 Cruzados Novos in one supermarket and only 15 in another. The need to make frequent calculations in such a confusing environment was reflected in a doubling of sales of portable calculators in just one year (Cardoso, 1991: 137).

Moreover, with the acceleration of inflation, the past was no longer regarded as a reliable guide for the conventions and norms which organized the indexation system. In the search for alternatives, there was even an increase in the interest of entrepreneurs in esoteric practices (e.g. Tarot) as an aid to plan the activities of their firms (Earp, 1993: 110).
tentative attempts of the government to negotiate with entrepreneurs and workers mechanisms for the correction of contracts (through the so-called Sectorial Chambers), the instability of the situation led those agents who possessed market power to increase their mark-ups speculatively. As a result, inflation accelerated still more, reaching 49.4% in December and 71.9% in January 1990.

Thus, between the end of 1989 and the beginning of 1990 there was a progressive abandonment of the legal forms of indexation and a simultaneous search for alternative mechanisms which could better reflect the expectations of future inflation. Although rational from the individual point of view, that move further eroded confidence in the stability of the relation of representativeness between the instruments which performed the standard-of-value function and the legally enforced means of payment. And as there were no alternative stable institutions to regulate the process of representativeness between the value of the indexes and assets which progressively assumed the standard-of-value function in replacement of the BTN and the legal means of payment (*Cruzado Novo*), the former were no less imaginary than the BTN. As a consequence, one of the basic conditions to maintain money as a social operator was being eliminated.

Through 1989 and the beginning of 1990, confidence in the other set of institutions on which the unity of the functions of money depends (that which regulates the process of convertibility between the assets which serve as store of value and the legal means of payment) was also clearly disrupted. That is, confidence in the capacity of the financial applications based on public bonds to serve as store of value deteriorated to the point of destroying one of the few defensive mechanisms producers still possessed against the uncertainties inherent in monetary contractual relations.
Although the Summer Plan had been conceived to fight the contradictions of the Brazilian high inflation regime, it actually deepened those contradictions. As seen above, after that stabilization plan interest rates were set at very high levels both to inhibit demand and to avoid the migration of financial wealth towards either real assets or foreign currency markets (Table 7.1). In this context, those who kept their wealth in terms of those applications obtained a very high yield. Nevertheless, the financial fragility of the government was simultaneously intensified, the expectational component of the price-setting process was exacerbated and inflation accelerated. Cumulatively, by the beginning of 1990 the financial fragility of the government became so great and so apparent that confidence in the capacity of the government to honour public bond-based applications was on the brink of collapse.

Thus, from the beginning of 1989 there was a double and contradictory process at work. On the one hand, private wealth was mostly and further attracted to public bond-based applications, for these were the most profitable and liquid applications then available to be used as store of value (Table 7.2). On the other hand, the same factors which made these applications attractive (the very high rates of interest) undermined confidence in their continued existence. As a result, the gains obtained in the public bond-based applications were gradually being applied somewhere else, mostly in export companies' bonds and real assets. Moreover, this move was still further magnified by the fact that, over the

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24 There is a reversal in this tendency between April and May 1989, when one may observe a reduction of the relative participation of government bonds among the main financial assets (Table 7.2). Such a movement was due to the then nonexistent rules of indexation in an environment of accelerating inflation. As a counterpart to this move, there was an increase in the demand for alternative assets (e.g. private bonds, foreign currency, telephone lines) and, consequently, in their prices. As soon as formal indexation was reintroduced, however, there was a return to the preceding tendency (Table 7.3).
year, the intensity of the acceleration of inflation depressed the expected real gains associated with those high interest rates. In other words, public bonds were gradually being disregarded as the most liquid of the available assets, this position being assumed by alternative assets.

The government attempted to reverse this disruptive tendency through two measures. Firstly, it attempted to control the Dollar market, so that it was not regarded as a profitable alternative for private agents to use as a store of value. To do so, however, it had to increase foreign currency reserves and to diminish the pressure to generate large trade surpluses. Accordingly, the payment of services related to the external debt was suspended from September onwards and both the remittance of profits abroad and repatriations of capital were delayed (Oliveira and Biasoto, 1990: 29). Secondly, it was also necessary to increase the attractiveness of public bonds. In a context of distrust in their liquidity, the government opted, in the last months of 1989, once again for offering still higher interest rates based on the variation of the BTN (Table 7.1). These measures temporarily succeeded in preserving the already very fragile confidence in the stability of the process of convertibility between public bond-based applications and the means of payment (the Cruzado Novo), so much so that, the government bond-based financial applications with clauses of daily indexation increased their relative participation among the main financial assets between October and January 1990 (Table 7.2). However, and in spite

As a matter of fact, real overnight interest rates were negative between June and September.

As a consequence of the increase in demand for alternative assets, there was a sharp rise in the price of the Dollar in the black market in August. Similarly, the price of private bonds negotiated in stock exchanges greatly increased between September and October (Table 7.3). Moreover, the price of gold increase almost 70% between the last days of September and the beginning of October (Cenários, 10.1989: 13) and the volume of gold negotiated in futures markets increased from 1.5 ton per day in January 1989 to 5 ton per day in October (Exame, 01.11.1989: 46).
of the temporary strengthening of the institutions of the high inflation regime, the inherent contradictions of this institutional setting engendered the further acceleration of inflation and the breakdown of the confidence in the capacity of the government to honour the promised liquidity of public bonds.

By the end of 1989, and especially by the beginning of 1990, the government's actions were no longer capable of reconstituting that confidence. In this context, the fear that some radical measure (e.g. a moratorium on the public debt) would be taken to solve the financial fragility of the government was disseminated, becoming almost panic in February, when, for the second month in a row, inflation reached 70% per month just as a new government was about to take office. In response to that, most economic commentators in the media were suggesting savings deposits as the best option for private agents to leave their liquid wealth, given the constitutional safeguards against the government intervening in those accounts. In fact, between January and February 1990 there was a significant transfer of resources kept in government bond-based applications to savings accounts (Table 7.2). Moreover, from December there was a clear revaluation of the prices of alternative assets, which indicates that there was a progressive move towards the use of speculative and real assets as stores of value (Table 7.3). This repeated a process which had occurred in the aftermath of the stabilization plans implemented in the second half of the 1980s (especially after the Cruzado and Summer plans). Yet this move was now occurring in a context of very high and still accelerating inflation rates and not in one of drastic reduction in inflation rates. In the few days before the change of government, the

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27 For instance, the price of second-hand cars increased 20% per week in the first six weeks of 1990 (Macrométrica, 02.90: 2.1).
behaviour of agents became still more cautious. Many decided to leave their resources in current accounts and those still more fearful withdrew all their money and kept it at home. The intensity of that move was such that two days before the new government took office, the President decreed a three-day bank holiday in a desperate attempt to bring it to a halt.

In terms of the approach developed in section 2.4, one can say that in this short period there was a reversal of the movement observed over the whole decade. During the 1980s, government bond-based applications were regarded as the assets whose focus gain/focus loss pair lay more north-westward in the "gambler indifference map" than any other available asset. However, between the last months of 1989 and the beginning of 1990, the level of potential surprise attached to total loss of wealth held in those applications fell from high surprise to a real possibility. Simultaneously, the idea that one could lose all one’s wealth held in this form commanded more attention: the ascendancy function also shifted. Furthermore, the potential surprise associated with each specific positive outcome was higher than it used to be. Eventually, the focus gain/focus loss pair which depicts the liquidity of government bond-based applications moved to a more south-eastward position in the indifference map than those depicting the liquidity of savings deposits and, later on, even than those depicting the liquidity of current accounts. Thus, by February 1990 savings deposits started to be regarded as more liquid than indexed financial applications. The more the situation deteriorated, the sharper the shift of the potential surprise function, and the more comprehensive this change in evaluation.

Besides the ex-post register of the abandonment of the basic institutions which formed the high inflation regime — and the resulting search for alternative ones — that gradual distrust of agents can also be demonstrated through the examination of an ex-ante indicator. However, as
there is no way to know the perception of independent and decentralized agents before they take action in accordance to that perception, the source of that indicator cannot be the agent himself. Instead, as the behaviour of the private agents both informs and is influenced by the analyses, surveys and projections of research institutes and consultancy firms, the latter's forecasts can be taken as a good indicator of the mood of the private agents.28

Until September 1989, the analyses of most of research institutes and consultancy firms indicated a tendency for inflation acceleration. Despite this forecast, they also agreed that if the institutions of the high inflation regime were not destabilized by some inept action of the government, they would be strong enough to avoid hyperinflation at least until the effective change of government in March 1990 (e.g. Macrometria, 06.1989: 1.2; Cenarios, 09.1989: 7; Cecon, 09.1989: 10). However, some of the analysts also pointed out that the fear that wealth-holders had of the victory of the left-wing candidate in the presidential election in December could force the government to offer still higher rates of interest, thereby worsening its financial fragility and possibly stretching the capacity of the economy's institutional adaptation to its limit (e.g. IEI, 04.1989: 2).29 In this sense, there was a widespread view that confidence in the high inflation regime could be disrupted either by tactless actions of the

28 It must be said that the inflationary crisis has exaggerated the importance attributed to the analyses and forecasts made by research institutes and consultancy firms. Squeezed between the radical uncertainty about what may happen even in the short term and the supposed "knowledge" of economists, sociologists and political scientists, ordinary people have no choice but to pay close attention to what the "professionals" have to say about their future.

29 Conversely, as the monthly bulletin of Cecon (09.1989: 9) registers, the ascension of the right-wing candidate in the opinion polls—who constantly repeated he would not impose any kind of moratorium on the domestic debt—led public bond-based applications holders to be less fearful about a possible devaluation of their wealth.
government or by autonomous changes in evaluations by private agents.

From October onwards the analyses begin to show more pessimism. On the one hand, the proximity of the elections emphasized the fear of radical institutional changes in the monetary and financial markets in case the left-wing party won (e.g. Macrometrica, 10.1989: 1.2; IEI, 10.1989: 32). On the other hand, as inflation accelerated more than previously expected, there was an increase in the fear that the government would attempt to implement some stabilization plan similar to those implemented in the past.\(^{30}\) As a consequence, hyperinflation commenced to be discussed as a real possibility in the short term (Cenarios, 10.1989: 3). It became clearer that confidence in the stability of the institutions of the high inflation regime was quickly eroding. Although they had not yet been completely rejected, Cecon (11.1989: 16) affirms as undeniable the fact that the conventional rules of indexation were being abandoned as a consequence of the progressive acceleration of inflation.

December is a turning point in the evaluations of the consultant firms. By that time there were few doubts about the occurrence of a hyperinflationary process. Macrometrica (12.1989: 1.1), for instance, foresaw a hyperinflationary situation before the change of government, with all the typical features of those processes: generalized shortening of the maturity of contracts, shortage of credit, drastic decline in the supply of goods, decline in the purchasing power of wages, reduction in the retail sales, dollarization, etc.. In response to that picture, FIPE (12.1989: 9) pointed out, the new president would have no alternative but to implement

\(^{30}\) In this context, Cenarios (10.1989: 7) discusses - echoing what several political analysts were admitting as a necessity - the possibility of anticipating the date the government elected in December 1989 would take office (from March to January 1990), so that a more legitimate government (the first elected by the population in twenty-five years) could intervene in the economy.
a radical stabilization plan. In fact, a survey Cenários (12.1989: 3) undertook of 200 firms demonstrated that 81% of those interviewed believed that the next president would have to adopt some type of shock. In this context, Macrometrica (12.1989: 6.1) also affirmed that the Dollar would continue to be demanded as a hedge against possible losses that such an intervention in the economy would impose on those who remained in government bond-based applications.

This picture was further aggravated in January and February. Cenários (01.90: 6) considered that the fragility of the situation could prompt a flight from government bond-based applications to speculative markets in February. Although such a move was not attainable for all agents, some secondary markets were liquid enough to assume the role of store of value. Cecon (01.90: 11), in turn, pointed out the collapse of the institutional apparatus which had been preventing the emergence of hyperinflation, emphasizing the fact that it was no longer possible to postpone a drastic intervention in the economy. It is interesting to note, however, that the distrust in the capacity of the institutional framework of the high inflation regime to continue to adapt successfully to inflation acceleration was aggravated even after the defeat of the left-wing candidate in the presidential elections of December. That is, expectations of some drastic intervention were no longer being viewed as a purely political decision, but as an imposition of the exhaustion of the capacity for adaptation by those institutions.

To conclude, one can say that this process was the result of the total loss of confidence in the State as the agent capable of preserving the stable operation of a segment of the institutional apparatus on which the unity of the functions of money depends; i.e. of those institutions which regulate the convertibility between the instruments which served as
store of value and those legally enforced as means of payment. This
distrust led private agents to search for alternatives which were, in the
context of a decentralized and profit-seeking society, the only ones to
follow in rational terms. However, this very incisive flight from the
institutions which had maintained the unity of the functions of money in
Brazil for the whole decade, even under very high inflation, also
represents the culmination of the process of the deterioration of money as
a social operator. Actually, given the contradictions of the institutional
framework on which it was built, the maintenance of that unity in the
Brazilian economy, over the 1980s, was only possible through its gradual
dissolution. For many times it threatened to collapse and for many times
the capacity of both institutional and behavioural adaptation of the
Brazilian economy prevented it from happening. By the end of the decade and
beginning of 1990, however, that capacity to adapt was virtually exhausted
and the high inflation regime gave way to a hyperinflation regime.
Table 7.1 Monthly rates of growth of inflation, interest rates and exchange rate (January 1989 to March 1990).

<table>
<thead>
<tr>
<th>Months</th>
<th>Inflation(^1)</th>
<th>Interest Rates(^2)</th>
<th>Exchange Rate(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nominal</td>
<td>Real</td>
<td>Official</td>
</tr>
<tr>
<td>January</td>
<td>36.6</td>
<td>22.72</td>
<td>-10.13</td>
</tr>
<tr>
<td>February</td>
<td>11.8</td>
<td>18.95</td>
<td>6.39</td>
</tr>
<tr>
<td>March</td>
<td>4.2</td>
<td>19.72</td>
<td>14.86</td>
</tr>
<tr>
<td>April</td>
<td>5.2</td>
<td>10.55</td>
<td>5.12</td>
</tr>
<tr>
<td>May</td>
<td>12.8</td>
<td>10.49</td>
<td>2.01</td>
</tr>
<tr>
<td>June</td>
<td>26.8</td>
<td>25.78</td>
<td>-0.77</td>
</tr>
<tr>
<td>July</td>
<td>37.9</td>
<td>31.50</td>
<td>-4.63</td>
</tr>
<tr>
<td>August</td>
<td>36.5</td>
<td>33.31</td>
<td>-2.32</td>
</tr>
<tr>
<td>September</td>
<td>38.9</td>
<td>37.44</td>
<td>-1.07</td>
</tr>
<tr>
<td>October</td>
<td>39.7</td>
<td>44.10</td>
<td>3.15</td>
</tr>
<tr>
<td>November</td>
<td>44.3</td>
<td>45.45</td>
<td>0.82</td>
</tr>
<tr>
<td>December</td>
<td>49.4</td>
<td>60.41</td>
<td>7.38</td>
</tr>
<tr>
<td>January</td>
<td>71.9</td>
<td>63.48</td>
<td>-4.90</td>
</tr>
<tr>
<td>February</td>
<td>71.7</td>
<td>78.72</td>
<td>4.10</td>
</tr>
<tr>
<td>March</td>
<td>81.3</td>
<td>34.68</td>
<td>-25.72</td>
</tr>
</tbody>
</table>


1. GPI-DS (General Price Index - Domestic Supply)
2. net overnight interest rates
3. *Cruzado Novo/Dollar* (weighted average)
Table 7.2 Main financial assets as a percentage of total assets (January 1989 - February 1990)

<table>
<thead>
<tr>
<th>Months</th>
<th>M1</th>
<th>federal bonds and bills</th>
<th>savings deposits</th>
<th>time deposits</th>
<th>state and municipal bonds and bills</th>
<th>bills of exchange</th>
<th>mortgage bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>8.7</td>
<td>39.2</td>
<td>34.8</td>
<td>10.2</td>
<td>6.7</td>
<td>0.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Feb</td>
<td>7.6</td>
<td>42.2</td>
<td>35.4</td>
<td>7.6</td>
<td>6.5</td>
<td>0.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Mar</td>
<td>7.2</td>
<td>43.5</td>
<td>35.6</td>
<td>6.6</td>
<td>6.5</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Apr</td>
<td>8.6</td>
<td>42.1</td>
<td>36.1</td>
<td>6.2</td>
<td>6.3</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td>May</td>
<td>8.4</td>
<td>40.6</td>
<td>35.5</td>
<td>8.1</td>
<td>6.5</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>Jun</td>
<td>7.9</td>
<td>42.2</td>
<td>32.3</td>
<td>9.8</td>
<td>6.7</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>Jul</td>
<td>6.9</td>
<td>44.6</td>
<td>31.4</td>
<td>8.8</td>
<td>7.1</td>
<td>0.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Aug</td>
<td>8.2</td>
<td>45.0</td>
<td>29.7</td>
<td>8.9</td>
<td>7.0</td>
<td>0.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Sep</td>
<td>6.2</td>
<td>47.0</td>
<td>29.1</td>
<td>9.0</td>
<td>7.5</td>
<td>0.2</td>
<td>1.0</td>
</tr>
<tr>
<td>Oct</td>
<td>6.1</td>
<td>47.9</td>
<td>27.9</td>
<td>9.2</td>
<td>7.9</td>
<td>0.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Nov</td>
<td>6.1</td>
<td>48.5</td>
<td>25.5</td>
<td>10.3</td>
<td>8.5</td>
<td>0.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Dec</td>
<td>7.4</td>
<td>49.2</td>
<td>22.4</td>
<td>11.7</td>
<td>8.3</td>
<td>0.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Jan</td>
<td>5.4</td>
<td>50.2</td>
<td>22.0</td>
<td>11.8</td>
<td>9.6</td>
<td>0.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Feb</td>
<td>6.0</td>
<td>47.8</td>
<td>25.7</td>
<td>9.6</td>
<td>9.8</td>
<td>0.1</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Source: Banco Central, Annual Report.

*obs:* the sum of the annual values in the columns "federal bonds and bills" and "time deposits" comprises most of the government bond-based financial applications available for the private agents.
Table 7.3 *Bovespa* index, price of a telephone line and the exchange rate between the *Cruzado Novo* and the Dollar in the black market (January 1989 to February 1990; December 1985=100).

<table>
<thead>
<tr>
<th>Months</th>
<th><em>Bovespa</em> index</th>
<th>telephone line</th>
<th>exchange rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>37.12</td>
<td>98.21</td>
<td>78.95</td>
</tr>
<tr>
<td>February</td>
<td>55.07</td>
<td>111.81</td>
<td>92.00</td>
</tr>
<tr>
<td>March</td>
<td>76.03</td>
<td>122.19</td>
<td>115.63</td>
</tr>
<tr>
<td>April</td>
<td>113.28</td>
<td>188.36</td>
<td>127.34</td>
</tr>
<tr>
<td>May</td>
<td>110.72</td>
<td>238.22</td>
<td>118.43</td>
</tr>
<tr>
<td>June</td>
<td>51.46</td>
<td>285.51</td>
<td>111.23</td>
</tr>
<tr>
<td>July</td>
<td>67.75</td>
<td>233.83</td>
<td>109.48</td>
</tr>
<tr>
<td>August</td>
<td>64.97</td>
<td>186.05</td>
<td>160.72</td>
</tr>
<tr>
<td>September</td>
<td>70.49</td>
<td>171.24</td>
<td>143.18</td>
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<td>October</td>
<td>77.55</td>
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<tr>
<td>November</td>
<td>49.83</td>
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<tr>
<td>February</td>
<td>60.50</td>
<td>225.50</td>
<td>105.11</td>
</tr>
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1. *Bolsa de Valores de Sao Paulo* (Sao Paulo stock exchange).

2. The use of telephone lines as store of value has gradually assumed more importance in Brazil over the years of monetary crisis. The reasons for that unusual function for telephone lines may be associated with the fact that they are homogeneous assets, do not suffer relevant depreciation and can be easily bought and sold through specialised sections in newspapers. The data in the table refer to the average price of a telephone line in several areas of São Paulo.
CONCLUSIONS

The major theoretical purposes of this thesis were to demonstrate the institutional character of money and to examine the conditions necessary to preserve it as a social operator. It was shown that money is a social institution because it carries "rules and resources" necessary for the creation of productive wealth and therefore for the material reproduction of modern capitalist economies. Moreover, as money provides those who command the financial and productive resources of the economy with some of the necessary requirements to generate profits through the activation of the productive sphere, money was presented as an unifier of private interests and social needs and, therefore, as an element of social cohesion.

In this sense, the approach developed in this thesis completely rejected the "Real Analysis" models, in which money is only an unnecessary add-on to barter economies. To mark this distinction, chapter 1 showed that models derived from the General Equilibrium approach cannot find any important role for money to play, given the incompatibility between complying with its main theoretical assumptions and allowing money to perform a relevant part in the generating-wealth process. Accordingly, it was claimed that any attempt to integrate money purposefully into General Equilibrium-based models is prone to fail. It was argued that the importance of money to the creation of wealth in capitalist economies could only be fully understood by resorting to a "Monetary Analysis", in which money enters "on the very ground floor" of the analytic structure.

In contrast to General Equilibrium models, the Post Keynesian approach was presented as one of the most crucial contributions for the elaboration of a "Monetary Analysis", for money is intrinsic to its
explanation of the extent to which the productive sphere is activated. To
introduce money in such a purposeful way, the Post Keynesian view rejects
the General Equilibrium assumption of intertemporal contingent markets and
assumes, instead, that decisions are taken in an environment of radical
uncertainty concerning their outcomes. However important this move for
understanding how money affects the degree of activation of the productive
circuit, it was argued that even the Post Keynesian approach does not fully
encompass the institutional character of money. It was suggested that this
is so because it takes the monetary nature of contractual relations for
granted, thereby failing both to explain the importance of money as a
provider of the necessary requirements to activate the productive circuit
and to examine the conditions needed to preserve money as such a social
operator.

Thus, although incorporating the advances of the Post Keynesian
approach regarding the importance of the passage of time for the capitalist
decision-making process, the need to go further in the analysis of the
institutional character of money was emphasised. The key argument of the
thesis rested upon the centrality of contractual relations for the
generation of productive wealth and the cruciality of money for the
existence of contracts in market economies. Even if departing from an
economic standing point, the elaboration of this argument attempted to
demonstrate the importance of the social, political and cultural dimensions
of social systems for both the emergence and the preservation of money as
an element of social cohesion. To do so, the analysis resorted to a variety
of contributions which, although not totally compatible with each other,
share the rejection of reductionist approaches and the possibility of being
integrated into a more comprehensive view.

The main features of this alternative view were developed in chapters
2 and 3. Chapter 2 demonstrated how the main functions of money (standard of value, means of payment and store of value) are all essential for the establishment of contracts in capitalist economies. Initially, it claimed that, given the disruptive processes inherent to any attempt to define exchange values in real terms, organised contractual relations can only be established if money operates as the standard of value. That is, as only money gives contractual relations a social meaning, organised market economies have no existence but in monetary terms. Despite this central role of money, it was also argued that contracts are only established if socially accepted representatives of the standard of value are expected to be used as means of payment, so that the transfer of wealth promised when contracts are established can be confirmed when time is due. Moreover, it was claimed that the emergence of money both as an idea and as a symbol which regulate contractual relations is concurrent with the historical emergence of market relations as the dominant form whereby social systems reproduce themselves. Finally, the importance of the store-of-value function of money was justified on the grounds that the establishment of contracts implies an unspecified need for means of payment in the future.

Those functions of money taken together create the necessary conditions for the existence of channels of communication between independent agents, for their complementary character provides those agents with the codes and rules necessary both to establish and to discharge contractual commitments. However, even though the complementarity between the functions of money attests to the institutional standing of money, such complementarity can only be maintained in modern economies if, as argued in chapter 3, there is unity of the functions of money. That is, if there exists widespread confidence in the stability of (i) the process of convertibility between the assets used as store of value and those accepted
as means of payment and (ii) the relation of representativeness between the latter assets and the socially accepted standard of value. In this sense, the unity of the functions of money was proposed as an *ex-ante* concept related to the trust each individual producer possesses in his ability to employ the distinct instruments which perform the functions of money as a single institution. Only if this trust endures can the complementary character of the functions of money be preserved and can money continue to act as the regulator of the contractual relations on which the creation of productive wealth is based.

It was also argued that the information required to preserve confidence in that relation of exchangeability cannot be the outcome of careful deliberation by each individual producer. As several distinct instruments are used to perform the functions of money, any rational assessment concerning the stability of the relations of representativeness and convertibility between those instruments would be so complex and so time-demanding that they would paralyse the productive sphere. Instead, it was claimed that such an evaluation must come as the result of an almost totally unconscious cognitive process, which would depend, in turn, on the interplay between individuals’ perceptions of the information provided by an ever-evolving social structure and the constraints this structure poses, at any particular moment, on individual action. Through that interplay information is passed on and reinforced, gradually becoming conventions to be followed by producers when establishing contracts. Indeed, as this process generates and embodies common values, shared beliefs and claims which continually legitimate their forms, it was affirmed that the degree of reliability of the information it provides is culturally bounded. In this sense, money was defined as an evolving institution which emerges and exists within specific *cultural* boundaries.
It is the widespread adherence to those conventions that promotes the unity of the functions of money, thereby creating a social space (the space of contractual relations) in which distinct interests can converge. Yet, due to its conventional nature, it was claimed that confidence in the stability of the relations of representativeness and convertibility between the instruments which perform the functions of money is very fragile and can, accordingly, be shaken by destabilising processes. If this happens, the inescapable tension between private interests and social needs surfaces and social cohesion is made more difficult to achieve.

Chapter 4 demonstrated how accelerating inflation may disrupt those conventions until the point of virtual rupture of the unity of the functions of money. Simultaneously, it showed how modern capitalist economies are capable of both creating compensatory institutions and promoting behavioural adaptations to overcome the disruptive effects of inflation. To achieve this double objective a qualitative taxonomy of inflation (low, high and hyperinflation) was proposed. This taxonomy demonstrates both the main features and the limits of those adapted economies (low, high and hyperinflation regimes) to maintain the unity of the functions of money if inflation persists in accelerating. Particular attention was assigned to the analysis of the high inflation regime, in which both high levels of inflation and institutional and behavioural changes are deeply embedded in the mentalities and practices of producers, thereby engendering a culture of inflation which neutralises the disruptive effects of inflation and preserves money as a social institution. Concurrently, the taxonomy presents three distinct stages in the progressive rupture of that unity, the last coinciding with the disappearance of the codes and rules which provide private agents with the information necessary to activate the productive sphere. Finally,
stabilisation is identified with the attainment of the institutional and
behavioural changes necessary to reverse the process of deterioration of
the unity of the functions of money. These changes were discussed in the
context of both high inflation and hyperinflation.

The second part of the thesis (chapters 5 to 7) analysed both the
emergence and the decay of the Brazilian high inflation regime between the
early 1960s and the late 1980s. The objective of this analysis was two-
fold. First, it was thought of as an application of the ideas developed in
the theoretical chapters, so that their relevance for understanding
commonly neglected but essential aspects of monetary crises were
emphasised. Second, it was thought of as a reinterpretation of the
Brazilian monetary crisis during the 1980s. Resorting to several distinct
assessments, the main traits of that crisis were reformulated in an
original way, so that the debasement of money as a social operator occupied
the centre of the analysis. Moreover, as a consequence of the explicit
interdisciplinary bias of the thesis, the importance of the evolving social
and political environment in which the Brazilian high inflation regime both
evolved and declined was brought into evidence.

Both the emergence and the main features of this regime were analysed
in chapter 5. It was argued that it evolved as the unplanned result of
institutional reforms adopted by the government to combat inflation in the
mid-1960s. The main characteristics of the Brazilian high inflation regime
were the widespread indexation of contracts and the use of indexed assets
as a store of value. However, as inflation was lowered in the early 1970s,
those institutional devices were soon regarded as unimportant for
establishing contractual relations. It is only from the middle of the
decade, with the abrupt rise of prices, that those institutional devices
were steadily and gradually adopted by agents. An essential characteristic
of the Brazilian high inflation regime was the central role assumed by the State. As claimed in chapter 5, confidence in the stability of the institutions which allowed the establishment of contracts was founded on and confounded with trust in the State as a social operator. Moreover, given the widespread adherence to the high inflation regime, it was suggested that the generation of productive wealth in the Brazilian economy was heavily dependent on the culture of inflation. Despite temporary disturbances and high levels of inflation, the unity of the functions of money was maintained until the late 1970s.

Changes in the international environment and the response of the government to those changes provoked the acceleration of inflation and undermined confidence in the stability of the previous institutional arrangements which had maintained money as an element of social cohesion. However, as demonstrated in chapter 6, the policies adopted by the government to solve the external crisis also improved some institutional features of the high inflation regime and induced behaviour adaptations which consolidated the culture of inflation and restored the unity of the functions of money. The central role of the State in the Brazilian high inflation regime was further exacerbated. Besides regulating the mechanisms for the indexation of contracts, government bonds and government bond-based financial applications gradually assumed the preference of agents as the most reliable instrument to store value.

Despite the apparent success of those adaptations in preserving the unity of the functions of money, it was claimed in chapter 7 that the reformed structure contained the seeds of its own destruction. As a consequence, by the end of the decade there was a visible rejection of the institutions of the high inflation regime, which led Brazil to the brink of hyperinflation. The first major destabilising effect of the adaptations
of the high inflation regime relates to the progressive deterioration of public finances, which was the counterpart of the widespread use of government bonds and government bond-based applications as store of value. As a response to that deterioration, it was shown that there was an increasing fear that the government decreed a domestic moratorium on government bonds and/or changed the mechanisms of indexation to alleviate pressures on its accounts. Despite attempts by the government to reverse the situation, confidence in the stability of the processes of representativeness and convertibility between the assets which performed the functions of money was gradually undermined. In this sense, it was claimed that, although preserving the unity of the functions of money in the short term, the adaptations of the Brazilian high inflation regime to inflation acceleration possessed internal contradictions which gradually destroyed that unity in the long term.

The second major disrupting consequence of those adaptations was the exclusion of many Brazilian citizens from the sphere of monetary contractual relations, thereby generating a perception that the unity of the functions of money was being maintained only for a fraction of the population; i.e. only for those who had access to the protective institutions of the high inflation regime. As a consequence, the codes and rules which maintained the unity of the functions of money for the non-excluded were gradually being ignored and/or challenged by the excluded. Expelled from the monetary circuit, the excluded individuals had to rely on individualistic and often violent mechanisms for attaining their desires for wealth. This generated an environment of social unrest in which distrust in the capacity of the State to maintain a space of socialisation pervaded all its institutions, including those which regulate the relations of exchangeability between the instruments which perform the functions of...
money. Thus, it was shown that the excluding character of the Brazilian high inflation regime reinforced its contradictory duality. Although sustaining money as an element of social cohesion for most of the decade, that regime possessed contradictions which ultimately undermined the confidence in the unity of the functions of money.


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