INVESTMENT FINANCE, SAVING AND FUNDING AND FINANCIAL SYSTEMS IN ECONOMIC DEVELOPMENT: THEORY AND LESSONS FROM BRAZIL

Rogério Studart

A thesis submitted for the degree of

Doctor of Philosophy

University of London

Department of Economics
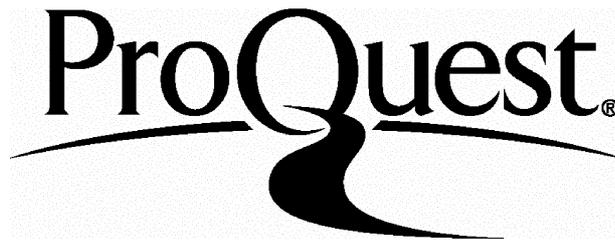
University College

December 1992

1

ProQuest Number: 10044409

ProQuest 10044409

ABSTRACT

This thesis discusses the Post Keynesian theoretical perspective on the role of banks, financial markets and savings in the process of economic development in the light of the Brazilian experience from 1947 to 1983.

In contemporary Post Keynesian theory, growth and investment are determined by long-term entrepreneurial expectations and the availability and cost of finance. Finance is sharply distinguished from saving - which is said to derive from, rather then be a precondition for, growth. The supply of finance in economies with a developed financial structure is determined, thus, by banks and their expectations. Saving, which funds (but does not finance) capital accumulations, hence has an important role, in the Post Keynesian theoretical perspective, in maintaining the financial stability of the growing economy.

Post Keynesian theory, nevertheless, is based on a specific type of financial system, with well-developed banking and non-banking financial institutions and markets for a diversified range of financial assets. Most developing countries, in contrast, do not have developed financial markets, and growth has to depend heavily on bank credit. Such credit-based financial structures need to develop alternative institutions to finance - and, especially, fund - long-term investment, to avoid the risk of financial instability and other possible adverse side-effects of growth.

The theoretical modifications to Post Keynesian theory, necessary in applications to developing countries, are discussed in the context of the Brazilian case. The period from 1947 to 1983 in the history of Brazilian economic development was chosen for two interrelated reasons. First, there are two clear cycles in the process of industrialisation of the country during the period 1947-55 and 1967-83.

Second, and perhaps more importantly, the intervening period saw a reform (in 1964-65) which substantially changed the functioning of the financial markets. The reform focused on long-term financing, recommending increases in the real internal interest rates (through indexation) and a greater openness to foreign borrowing, in

order to increase the availability of loanable finds. These measures, however, produced a highly fragile and speculative financial system, which continued to depend upon the state for a long-term investment funds and tended to borrow foreign currency at higher levels than the finance requirements of the country warranted.

Therefore, using a Post Keynesian approach, this thesis maintains that the 1964-65 financial reform was based on a misguided theory and that, consequently, in a great extent responds for Brazil's recent imbalanced path of development.

To Christine, Rafaella, Camila and Marlene.

ACKNOWLEDGMENTS

TABLE OF CONTENTS

III. GROWTH, FINANCIAL FRAGILITY AND FUNDING: THE ROLE OF SAVING AND FINANCIAL MARKETS FROM A POST KEYNESIAN PERSPECTIVE

10

14

LIST OF TABLES

16

LIST OF ABBREVIATIONS

BCB   Banco Central do Brasil
               (Central Bank of Brazil)

BB   Banco do Brasil S.A.
               (Bank of Brazil)

BNDE(S)   Banco Nacional de Desenvolvimento Econômico e Social
               (National Economic and Social Development Bank)

BNH   Banco Nacional da Habitação
               (National Housing Bank)

CDB   Certificados de Depósitos Bancários
               (Certificates of Bank Deposit)

CDC   Crédito Direto ao Consumidor
               (Direct Consumer Credit)

CEF   Caixa Econômica Federal
               (Federal Savings Bank)

CMN   Conselho Monetário Nacional
               (National Monetary Council)

FGTS   Fundo de Garantia de Tempo de Serviço
               (Job Tenure Guarantee Fund)

FGV   Fundação Getúlio Vargas
               (Getúlio Vargas Foundation)

FINAME   Agência Especial de Financiamento Industrial
               (Special Agency for Industrial Financing)

Financeiras Sociedades de Crédito e Financiamento
               (Finance Companies)

FINSOCIAL Fundo de Investimento Social
               (Fund for Social Investment)

GDP   Gross Domestic Product

IBGE	Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics)
IPEA	Instituto de Pesquisas Econômicas Aplicadas (Institute of Applied Economic Research)
LDCs	Less developed countries
LIBOR	London Interbank Offer Rate
LTN	Letras do Tesouro National (National Treasury Bill)
ORTN	Obrigação Reajustável do Tesouro Nacional (Readjustable Treasury Bond)
OTN	Obrigação Reajustável do Tesouro Nacional (National Treasury Bond
PAEG	Programa de Ação do Governo (Government's Action Plan)
PASEP	Program do Patrimônio do Trabalhador do Setor Público (Asset Accumulation Program for Public Servants)
PIS	Programa de Integração Social (Program for Social Integration)
SFH	Sistema Financeiro de Habitação (Housing Finance System)
SNCR	Sistema Nacional de Crédito Rural (National Agriculture Credit System)
SUMOC	Superintendência da Moeda e do Crédito (Superintendence of Money and Credit)
n.a (in Tables)	not applicable
... (in Tables)	data not available

INTRODUCTION

One common assumption in models of finance and economic development is that saving is a precondition to investment and economic growth - an assumption which we call hereafter the 'prior-saving' argument. The two-gap models, for instance, claim that external saving is required for development if both the investment-saving and the import-export gaps are to be overcome (e.g. Chenery and Strout, 1968). The prior-saving argument is also present in other models in development economics, such as the financial liberalisation models (e.g. Shaw, 1973 and McKninnon, 1973). These models maintain that internal saving/investment can be increased by stimulating savings with positive interest rates and increasing the competition between financial institutions through financial deregulation.

That prior-saving argument is a pre-Keynesian concept is recognised by many Post Keynesians (e.g. Davidson, 1978 and 1986; Chick, 1983 and 1986; Terzi, 1986; Amadeo and Franco, 1988; Carvalho, 1992; Richardson, 1986). However few have explicitly acknowledged the full consequence to the analysis of finance and growth, let alone of finance and economic development of the reversal of causality (between finance and saving) proposed by Keynes (1936). In this thesis, the Post Keynesian theory is used in search for an alternative approach on the role of banks, saving and financial markets in the process of development. The thesis is mainly concerned with the internal mechanisms to finance accumulation. Nevertheless, given the importance of the external debt problem in many less developed countries (LDCs), the role of foreign debt to development is also addressed. Finally, the Brazilian experience from 1947-83 is used to illustrate how such a Post Keynesian approach can be applied. The thesis is set out as follows.

Chapter I surveys the economic literature on finance and economic development. This aims at establishing the theoretical foundations of the prior-saving argument and at determining how such unifying principle has been used for policy purposes. As illustrations of the use of the prior-saving argument in models of finance

and economic development, the two-gap and the financial liberalisation models are appraised. The choice of these two models was not random, as they have been influential for policy purposes in multilateral agencies as much as in LDCs' government. For instance, the two-gap models was fashionable in the 1970s, and were much used to consubstantiate the mounting of foreign debt by LDCs (see e.g. World Bank, 1984b). When the Debt crisis began in 1982, and voluntary capital inflows rapidly declined, the financial liberalisation models became the main theoretical foundation behind the financial policies advocated by multilateral development agencies such as the World Bank and the International Monetary Fund to LDCs (see e.g. World Bank, 1989).

Chapter II presents the Post Keynesian foundations for the critical appraisal of the 'prior-saving' argument and for the alternative view on finance and economic development proposed in this thesis. This is done by discussing three common assumptions in most Post Keynesian analysis of finance and growth. These are

(1) investment is the causal determinant of output, employment and income; finance, and not savings, is the pre-condition to investment;

(2) from a macroeconomic standpoint it is banks, and not saving, which play the most fundamental role in the process of finance. In other words, even though investment can be financed by several techniques, if banks are not willing to expand their loans to finance investment, growth cannot take place; and

(3) the rate of interest may affect the investment decision and, especially, the allocation of financial wealth between different existing assets. Only as a determinant of investment and partly of the credit conditions can the rate of interest affect saving. Otherwise, saving is mainly determined by the level of income.

In **Chapter III**, using the Minskian financial fragility hypothesis, we built on the above-mentioned assumptions in order to complete our Post Keynesian approach to finance and growth with the following complementary assumptions:

(4) economic growth is normally accompanied by increasing levels of indebtedness of firms and of the financial exposure of banks and other financial institutions. Hence, growth increases the economy's financial

fragility;

(5) this financial fragility can be mitigated by funding, that is, the issue of long-term securities by the investing firms to consolidate their short term liabilities; if saving does not finance investment, it has an important role in funding investment. Consequently, financial markets may play a fundamental role in a financially stable process of growth/development. This role is however ambiguous, because of the inherent volatility of those markets; and

(6) Finance and saving must also be distinguished in regard to the role of foreign capital inflows to economic development. These inflows can be determined either by the increasing demand for real resources from abroad, or by purely financial causes. Such flows are only functional to the process of development if they finance transfers of real resources from abroad, which can complement internal accumulation.

Further, this chapter formalise the concept of functionality, which is the counterpart from our Post Keynesian perspective to the concept of efficient capital markets. A functional financial system is defined as one which, irrespective of its stage of development or institutional fabric, finances accumulation with the least increase of financial fragility through the process of growth.

Chapter IV concludes the theoretical part by applying the model of finance and growth (established in the previous two chapters) to the context of development. It begins by distinguishing between credit-based and capital market-based financial structures in the context of the Post Keynesian theoretical framework developed in chapter II to III. It also shows that the pace and the path of financial development is not independent from the historic circumstances in which development takes place, and it points out the reasons why most 'late-coming' industrialising economies tended to develop credit-based financial structure. After showing why most LDCs tend to depart from bank-dominated system, the concept of functionality permits us to draw some policy-recommendations towards the enhancement of functionality and the development of different financial structures.

Once the Post Keynesian view on finance and economic development is discussed, **Chapter V** establishes a transition between theory and application. This presents the method to be used in the analysis of and the main hypothesis that we

want to analyse in the case-study.

In the empirical part (chapters VI to VIII), the Brazilian experience of financial and economic developments between 1947 and 1983 is used as case-study. The period is divided into two distinct phases of Brazil's development. The first one (1947-66) was characterised by the import-substitution of durable consumption goods and of substantial part of the light capital goods (1947-61), followed by a recession between 1962-66. The second phase (1967-83) marks the resumption of growth (1967-73) and industrialisation (1974-80) with the Second National Development Plan which promoted the import-substitution of heavier capital goods and chemicals. As regards the financial structure, the two phases are also divided by the 1964-6 financial reform, which transformed the bank-dominated system into a more complex and segmented structure. The relevance of the Brazilian experience lies on the fact that the reform, at least as regards the provisions for the development of mechanisms to finance long-term investment, was guided by what was previously coined the 'prior-saving' argument. In a nutshell, this reform attempted to enhance the country's internal saving, at the same time creating mechanism to increase the absorption of external saving. This was done by a mixture of institutional reforms (creation of investment banks and incentives to acquisition of stocks), indexation of financial assets and other measures which were viewed as stimuli to saving. We claim that the misleading theoretical foundations of the 1964-6 reform created a financial system which was even less functional to Brazil's economic development than the one which existed before the reform. In addition, it is claimed that much of the financial chaos which the country increasingly had to face in the 1980s - that is, internal and external debt, severe financial instability and highly speculative character of the financial system - can be greatly blamed on the 1964-65 financial reform.

The empirical part of the thesis is set out as follows. **Chapter VI** presents a analysis of finance, financial development and growth in the period 1947-66. Emphasis is placed on the mechanisms to finance investment and of the use of external resources to support growth. It will be shown that the underdevelopment of the financial structure did not constrain growth. Nevertheless the gap between the evolution of the productive and the financial structures produced some destabilising features, which contributed to the crisis in which the country submerged from 1962

to 1966.

Chapter VII analyses the financial reform and its logic. In addition, the process of rapid financial deepening and its role in the economic boom of 1967-73 are discussed. Finally, it will be shown that the reformed financial structure already showed signs of dysfunctionalities in the period 1967-74 - such as the increase of speculative environment in the financial system, the 'short-termism' of the private financial sector, the tendency to borrow in foreign currency above the needs of the macro-economy. We further claim that these dysfunctionalities were to emerge inevitably as soon as investment began to rise.

Chapter VIII analyses the period 1974-79, when investment did rise rapidly, and 1980-83, the recession and the 'lost decade' began in Brazil. The period was characterised by severe macroeconomic shocks, such as the oil shocks (from 1973 onwards) and the interest rate shocks (from 1978 onwards). Those shocks are important in understanding the macroeconomics of the period, however this chapter maintains that the weaknesses of the reformed financial structure had an important, and usually underestimated, role in amplifying the destabilising features of Brazil's growth in the 1970's.

Chapter IX first summarises the findings of this thesis and presents the conclusions.

I. FINANCE AND ECONOMIC DEVELOPMENT: THE DOMINANCE OF THE PRIOR-SAVING ARGUMENT

I.1. Introduction

One common assumption of the models concerned with finance and development is that saving is a precondition to investment and economic growth - a view which was called the prior-saving (PS) argument in the introduction to this thesis. The PS argument has had both theoretical and policy consequences for development economics. From the theoretical perspective, it implies a hierarchy in the dynamics of a capitalist economy: savers, as suppliers of saving/capital, ultimately determine the pace of accumulation.[1]

In what concerns policy-making, the need to increase the availability of either internal or external saving is normally implicit in models attached to the PS argument. Thus policy-recommendations have stressed the need to create internal institutional mechanisms to stimulate saving; to attract foreign saving by opening the internal financial system to foreign capital inflows; and to eliminate "financial repression" and to correct other constraints to the functioning of the market-clearing mechanisms.

This chapter aims at discussing the origins of the PS argument and its consequences to economic development models. The relevance of this discussion will become evident in the next chapters, when Keynes's disputing assumption (that finance and investment precede saving) is used to build an alternative view of finance in economic development.

The chapter is set out as follows. Section I.2 discusses the theoretical foundations of the view that identifies finance with saving. Section I.3 describes how, macroeconomic/financial theories have converged towards the implicit acceptance of

---

[1] In Chick's (1983: 190) words: "The ideological importance of this view of investment *resulting* from saving is clear enough: savers determined the rate of capital accumulation. The choices of households control the firms: consumer sovereignty determines current output and saving determines future output".

this view. Section I.4 assesses the relevance of the above-cited identification to economic development models and the two-gap models and the financial liberalisation models are specifically discussed - in view of their relevance in policy recommendation for developing countries in the last thirty years. Section I.5 summarises the findings and presents the conclusions of the chapter.

I.2. The theoretical foundation of the PS argument

The theoretical foundation of the prior-saving argument in development economics is the identification of finance with saving - a common view in mainstream economics. In turn, this view is based on the postulate of long term neutrality of money and on the hypothesis that the financial market is an efficient intermediary between saving and investment. Each of these is briefly discussed below.

The postulate of long-term neutrality of money is one of the fundamental principles of classical and neoclassical economics. This postulate has permitted the mainstream economist to distinguish short term monetary phenomena from long term equilibrium values, so that all the fundamental theorems can be established in real terms - by the direct consideration of goods, preferences and technical constraints (Carvalho, 1992: 32).[2]

The introduction of money does not change this postulate as long as banks as well as other financial institutions are pictured as mere intermediaries between saving and investment. This has been the role of the loanable funds theory (LFT) in monetary economics (Rogers, 1989).

In LFT models, output is determined in the labour market. Equilibrium is only

---

[2] It is noteworthy that although sharing the postulate of the long-term neutrality of money, the theoretical agenda of the classical and neoclassical schools are different: "in classical political economy the laws of motion are all proposed as a result of the interaction between elements such as the surplus rate, the organic composition of capital, real wages and so on. The central proposition of neoclassical theory refers to the reconciliation between limited availability of resources and the consumers' preferences obtained by the system of relative (real) prices. Money cannot influence the basic choices to be made, except to the extent that it can obscure the informational content of market prices. In the long run, when all erratic influences are cancelled out and agents learn to separate information from noise (created by monetary disturbances), all that matters is real variables" (Carvalho, 1992: 32).

achieved when all factors are remunerated according to their productivity.[3] Since income is a mere representation of factors' participation in the output, saving can be identified with "capital". In other words, there is no fallacy in the passage from the microeconomic to the macroeconomic level. Consequently, the supply of saving/capital is seen as determined according to households' inter-temporal preferences (and is inversely related to the interest rate, r). In turn, the demand for capital (investment) is a direct function of the return on capital (or the marginal productivity of capital, mpc). Hence the equilibrium (or "natural") rate of interest (r_n) is the rate which equilibrates the quantity of capital saved (saving) and of capital invested (investment), thrift and productivity.

Figure I.1 - The saving and investment schedules in simplified loanable funds model

r, mpc

Saving
S (r)

r = mpc = rn

r < rn

Investment
I (mpc)

S < I   I = S   I = S + ΔM [s]

r = market rate of intest
mpc = marginal productivity of capital
rn = natural rate of interest
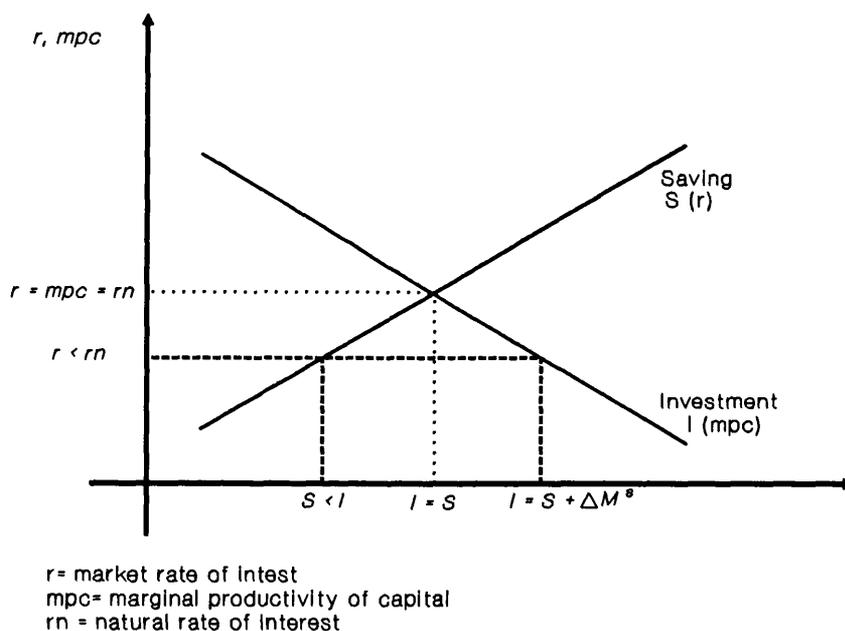
A change in the supply of money may provoke a departure from equilibrium, by reducing the market rate of interest. In this case, the interest rate will be lower

---

[3] The neoclassical labour market can be described as follows: (1) labour supply schedule is downward sloping, so as to reflect the decline of marginal disutility of labour (as opposed to leisure) as work hours increase. The labour demand curve is derived from the production function: assuming that capital is fixed (the Marshallian short period) and diminishing returns, the marginal productivity of labour declines with employment. Equilibrium in the goods market is achieved at the point where the real wage equals the marginal productivity of labour. Therefore, full employment - here defined as the nonexistence of involuntary unemployment - is guaranteed as long as real wage flexibility prevails.

than the natural rate, causing an excess demand for capital. As illustrated in Figure I.1, a volume of investment higher than the availability of saving can still be financed by the additional money supply $(I=S+\Delta M^s)$. However, if full employment is assumed, this disequilibrium in the money and saving-investment markets will be inflationary.[4] This is the logic behind the "forced-saving" hypothesis.

The second theoretical basis of identification of finance with saving is the application of the perfect market paradigm to monetary economics. This application has been put forth by Lewis (1992: 204) as follows:

> In an ideal world of complete and perfect capital markets, with full and symmetric information amongst all market participants, economic decisions do not depend in any way upon the financial structure. All the potential gains from adding banks are assumed away because every transactor is completely informed and honest about the environment, and frictions and indivisibilities do not exist. If banks do operate, they do so as traders or equity-financed mutual funds ... since households and firms have the information to arrange their own risk diversification.

The perfect market paradigm establishes that in the long run, if competition prevails in the financial system, the real interest rate will equate saving and investment optimally. For the purposes of this chapter the application of this paradigm to monetary economics has one important outcome: it makes the financial system, including banks, a neutral intermediary between savers and investors. There are however two other consequences which are worth remembering.

First the above-cited application determines that, in equilibrium, there will be no mismatch between investment and saving - hence between output and aggregate demand. This is an important hypothesis to sustain Say's Law and, therefore, the

---

[4] Of course the assumption of short-run neutrality of money will depend on the pace of readjustment in labour after a change in money supply. Ever since the Phelps-Friedman reinterpretation of the Phillips curve (the expectations-augmented Phillips curve), the pace of adjustment has become a matter of how workers and firms adapt their expectations to changes in money supply. In the long run, however, Friedman (1968) established and most mainstream economists accepted that the Phillips-curve is vertical. Finally, the rational expectations revolution restricted even further the effectiveness of monetary policy by claiming that not even in the short run the trade-off between inflation and unemployment existed, if some strong-form of rational expectations is assumed. For an extensive review, see Amadeo, 1982.

postulate of long run neutrality of money.[5] Second, the application of the perfect market paradigm is important for policy reasons. If the competitive capital market becomes the standard of efficiency of financial intermediation, inefficiency is associated with anything outside that paradigm.[6] This permits the analyst to view a "disequilibrium" in the optimal allocation of capital as the result of constraints on the functioning of the capital markets: lack of perfect competition or asymmetric distribution of information become 'distortions' in relation to the optimal, idealized structure. The role of analysis is thus to spot such imperfections and, perhaps, to point ways of reestablishing the sovereignty of the market-clearing forces (e.g. financial liberalisation).

I.3. The convergence towards the identification between finance and saving

It is difficult to trace the origins of any established view in social science. In our case, however, the idea that saving is the motor of accumulation can be certainly associated with the principle of the "virtue of the thrift":

> [T]hat Victorian principle was urged in that subliminal way that societies find their way to, because its basic aim was industrialisation, and the banks, in the 19th century stage of development, were not adequate to cope with the needs of the rapidly-expanding industry. Most borrowing had to be direct, and that meant prior saving (Chick, 1983: 191).[7]

---

[5] If saving were not totally channelled to investment, then aggregate demand would be below output. Then an increase of money supply to finance investment could increase the level of output.

[6] The competitive capital market is one where information is freely available and there is no constraint on the price mechanisms and competition. For instance, the efficient markets hypothesis suggests that the prices of shares are the best available estimates of their "real value" because information is made available in competitive stock markets - which implies that savers can count on past prices as a good guide for the actual value of a firm (weak-form efficiency) or that share prices fully reflect all publicly available information (strong-form efficiency). It is further implicit in financial models that if allocation is efficient at the microeconomic level, it will be optimal at the macroeconomic level because a high return on the capital saved will mean a high productivity of the capital invested. Any fallacy of composition is assumed away.

[7] Chick's hypothesis that the proposition that investment precedes saving depends on the stage of development reached by the banks was already raised in her *Macroeconomics after Keynes* (1983: 190). This was certainly the main inspiration of her theory of the stages of the development of the banking system (Chick, 1986). More on this theory in chapter II.

If Chick's hypothesis is accepted, then the fast development of the banking system in the end of the 19th century would have to inspire a revision of this view in economic theory. Indeed, the denial of the identification between finance and saving was a central feature of Keynes's macroeconomics (e.g. Keynes, 1936: 178; 1937a: 249) and Schumpeter's (1934) theory of economic development. Nevertheless, and despite Keynes's emphasis that this identification was fallacious as the theoretical foundation of macroeconomics, the pre-Keynesian view became one of the fundamental aspects of "modern" macroeconomic theory. How this theoretical tendency evolved and how it affected development economic models is assessed in the next section.

I.3.1. From Hicks and Tobin to the Monetarists

The convergence of monetary economics to the prior-saving argument has followed the track of the 'neoclassicisation' of macroeconomics after Keynes.[8] This theoretical convergence was achieved by the almost universal acceptance by monetary theorists of the Hicksian neoclassical synthesis (Hicks, 1937a) and the portfolio balance analysis (e.g. Tobin, 1958; 1965).

Already in Hicks's (1937) *Mr. Keynes and the Classics* Keynes's denial of the identification of saving and finance was played down:[9]

"As against the three equations of the classical theory,

$$M = k.I, \ I_x = C(i), \ I_x = S(i,I)$$

Mr. Keynes begins with three equations,

$$M = L(i), \ I_x = C(i), \ I_x = S(I)$$

These differ from the classical equations in two ways. On the one hand, the demand for money is conceived as depending upon the rate of interest (Liquidity Preference). On the other hand, any possible influence of the rate of interest on the amount saved out of a given

---

[8] On this see e.g. Leijonhufvud (1968), Robinson (1972), Davidson (1978), Chick (1983) and Carvalho (1992).

[9] In Hicks's (1937) notation M stands for money, I for income, I_x for investment, C for the marginal efficiency of capital schedule, i for interest rates and S for saving.

income is neglected. Although it means that the third equation becomes the multiplier equation, which performs such queer tricks, nevertheless this second amendment is a mere simplification, and ultimately insignificant. It is the liquidity preference doctrine which is vital" (Hicks, 1937a: 132-3; my emphasis).

Later Hicks will point out that:

"Mathematical elegance would suggest that we ought to have I and i in all three equations, if theory is to be really General. Why not have them like this:

$$M = L(I,i), \; I_x = C(I,i), \; I_x = S(I,i)?" \text{ (idem: 138)}.$$

The second logical step towards the reestablishment of the pre-Keynesian view on finance/saving is Tobin's (1958) reinterpretation of Keynes's liquidity preference theory. The portfolio balance analysis reinterprets Keynes's liquidity preference theory within a general equilibrium framework, substituting Keynes's concept of uncertainty (as affecting the allocation of financial wealth and its relation to money interest rate) by the one of risk (see Pettenati, 1977; and Chick, 1983). Risk here is defined as the variance of the return of an asset, which is assumed to be known by all agents. Once the risk preference is established and agents allocate their savings accordingly, the aggregate portfolio of financial assets is determined (Tobin, 1958). Variation within the portfolio of assets can only be achieved by changes in interest rates.[10]

The acceptance of the portfolio-choice analysis by Keynesians opened one front of the Keynesians/Monetarists debate, focusing on the period of expectation adjustment and substitutability between assets.[11] This debate can be summarised as follows. In equilibrium savers choose their portfolios according to their preferences and the relative remuneration of different assets. However, in the short run their choice can suffer from monetary illusion. In this case, and with adaptive expectation

---

[10] In this framework it is argued for instance, that an active monetary policy can stimulate growth by reducing the perceived return on money and thus forcing the substitution of money for capital in the portfolio of the agents (Tobin, 1965). The effectiveness of monetary policy will then depend on (1) the expectations of savers/wealth holders and (2) the degree of substitutability between assets.

[11] The other front, as we mentioned in footnote 4, was the Phillips curve and the effectiveness of monetary policy.

as common ground, Keynesians would naturally assume that only financial assets and physical capital are close substitutes so that this monetary illusion would take the form of a higher propensity to invest. In contrast, monetarists would assume that other goods should also be included, so that the excess money would increase nominal demand and inflate prices. Monetary economics became then the analysis of short-term departures from equilibrium, which are caused by exogenous changes of money supply.

The convergence towards the view that saving is independently determined from investment partly explains why Keynesian and the Monetarist visions only differ in the short term analysis (see for instance, Goodhart, 1975: 219-21). For, in the long run, when all illusions disappear, the balance between investment and saving must be reestablished. If investment exceeds *ex-ante* saving, either the propensity to save rises or through saving will have to be "forced" through inflation. Thus, if the question of the relation between saving and investment became more subtle in the Keynesians/Monetarists than in the Keynes/Classics debate, it is because of the common theoretical background of the former.

I.3.2. From the rational expectations revolution to the asymmetric information literature

The rational expectations revolution represented a frontal attack on both the Monetarist and the Keynesian positions.[12] If agents form rational expectations, then the possibility of monetary illusion is limited to the very short term. If a strong form of rational expectations is used, then monetary policy is totally ineffective both in the short and in the long term: any increase of money supply would just affect prices leaving the level of investment and output intact.

By incorporating rational expectations, neoclassical monetary economics finally abandoned the Monetarist-Wicksellian connection (Leijonhufvud, 1981: 131-202) for neo-Walrasian monetary theory. This conversion however had a high cost: as Rogers (1989: 3) rightly put it, "one horn of a dilemma facing neoclassical monetary

---

[12] A detailed examination of the rational expectations macroeconomics is beyond the scope of the present chapter. For this, see e.g. Rogers, 1989: chapter 3.

theorists" is the inessentiality of money in "modern" neoclassical theory (see also Hahn, 1981).

Furthermore, another interrelated horn exists: in neo-Walrasian monetary economics the distinctions between saving, capital and investment, which so much concerned monetary economists since Wicksell, became irrelevant. This has allowed mainstream economics to address saving without even mentioning the mechanisms by which it is transformed into investment - that is, the financial system. For instance, this is the case of the long survey on saving and development by Gersovitz, which is introduced by the following statement:

> Saving, a sacrifice of current consumption, provides for the accumulation of capital which, in turn, produces additional output that can be used for consumption in the future. The process is thus inherently intertemporal. Its presumed operation makes the saving behavior of citizens and their governments central to the development of poor countries. Moreover, threats of expropriation, repudiation and other hostile acts against foreign suppliers of capital, and donor resistance to significant increases in aid, mean that domestic savings is likely to remain the predominant source of capital accumulation in developing countries (Gersovitz, 1988: 382; my emphasis).

If the neo-Walrasian economics renders no role for the financial system, the question of finance also becomes useless. The only way that financial analysis becomes relevant is when the strong assumptions behind the perfect market paradigm are criticised. For instance, recently many neoclassical models have critically appraised the crucial assumptions about the availability and distribution of information between borrowers, lenders and financial institutions. The relaxation of the perfect information hypothesis permitted the mainstream economists to see a role for financial intermediaries: the lack of costless information gives financial intermediaries the role of assessing the credit-worthiness of borrowers.[13]

The growing literature on asymmetric information also points to two problems in financial intermediation which can jeopardise the allocative role played by intermediation: adverse selection, before intermediation takes place, and moral

---

[13] Credit-worthiness here is defined, accordingly, as the capacity to repay which in the long run is associated with the return of the borrower's investment project. A recent application of this view that financial institutions are "social accountants and screening devices for the allocation of credit" is found in Stiglitz and Weiss, 1988.

hazard, after intermediation.[14] Adverse selection occurs when lenders have trouble determining whether a borrower is a good risk (that is, good investment projects with low default risk) or a bad risk (bad investment projects with high default risk). Because of this lack of information, lenders will desire to pay for a security that reflects the average quality of firms issuing the securities - a price which is higher than the market value for high quality firms, and too high for the low quality ones - a classic case of 'the lemons problem' proposed by Akerlof (1970). Hence, only low quality firms will be willing to sell their securities.

Stiglitz and Weiss (1981) also demonstrated, using a loanable funds framework, that asymmetric information would generate credit rationing because low quality firms with riskier projects will be the ones willing to pay the highest interest rates. If lenders cannot identify riskiest projects, then the supply of loanable funds will shrink when interest rates increase, exactly the opposite result from that theoretically expected.

Finally moral hazard occurs if after a loan is extended the borrower might engage in riskier investment projects than those that were used to justify the loan. Again the danger of moral hazard may prevent lenders from extending credit, if when the interest rate makes it very attractive to do so. In other words, lending would be at sub-optimal levels.

The three cases just point to the possibility that, due to asymmetric information, the financial system may not play its role as broker in the saving-investment process efficiently. In other words, in these cases loanable funds to investment will be lower than potential and allocation of resources will be distorted. This literature presents an embarrassing challenge to the view that financial markets are efficient allocators of capital. But, in reality, it does not seem to advance much from the neoclassical perspective: the role of the financial system is still to provide intermediation between saving and investment; what is at stake is how well this role is performed. This type of argument leads to the view that, were it not for the problems generated by imperfect information distribution or other market failures, then that role would be fully restored and allocative efficiency of capital would

---

[14] See Stiglitz and Weiss (1981). See also Lewis (1992) for a review of contemporary mainstream theory on the banking firm under the assumption of asymmetric information.

prevail.

To sum up, these recent developments explore deviations from the perfect markets paradigm as regards the optimal allocation of the *assets* of financial intermediaries. As far as the theory is concerned, the *liabilities* side is an exogenous variable, determined by the preferences of consumers/savers. The identification of finance and saving is still sovereign.

I.3.3. The identification of finance, saving and investment in growth models

In growth theory the question of finance has traditionally been seen as one of availability and allocation of saving, normally denoted by the marginal propensity to save s. This is surprising given the Keynesian credentials of one of the founders of modern growth theory: Harrod. Again, this paradox has to do with the convergence towards the prior-saving argument of the models which followed Harrod's.

Harrod's (1939) model is concerned with establishing the level of investment throughout time that will maintain a dynamic equilibrium, ie that will continuously fulfil expectations of previously made investments. The fulfilment of such expectations depend on the current level of expected demand in relation the level of output capacity created by previous investment projects. Thus the model can be built on key variables determining the two outcomes of investment undertakings: namely, income creation (and thus the level of saving) and additional productive capacity (and thus the resulting aggregate production function). The result of Harrod's model is the well-known warranted growth rate (G_w) which is defined as follows:

$$G_w = \frac{\Delta x}{x} = \frac{\Delta I}{I} = \frac{s}{C} \qquad (1)$$

It is important to stress that in Harrod's equation the marginal propensity to save (s) only expresses the gap between income created by a certain level of investment and consumption. Hence, Harrod's perspective is very Keynesian: effective demand must be maintained at a level that satisfies producers. The lower the level of saving, the higher the multiplier, and the lower the level of investment required to fill the gap. Or, what is the same, if growth is to be maintained this

would require increasing levels of investment in order to compensate for a marginal propensity to consume which is normally lower than 1. Nothing, in Harrod's model, refers to the question of the financing of growth in market economies, and it may be said that financing is implicitly assumed to be always forthcoming.

Already in Domar's version of Harrod's dynamic model, the causality between the marginal propensity to save and the rate of growth is blurred. Harrod's equation was reinterpreted in order to show the balanced growth would require an improbable coordination of the saving ratio, of the capital/output ratio and the natural rate on a sharp knife edge. If capital is assumed to be scarce, however, saving can constrain growth.[15]

As a matter of fact, after Solow's (1956) interpretation of the Harrod-Domar model, very little remained even of the saving side of growth model.[16] Solow reinterpreted Harrod's Y as a result of a production function $Y = f (K,L)$ homogeneous of the first degree and with substitution elasticities lower than 1. With that reinterpretation he was able to prove that, in the long run, the real product growth rate depended only on the rate of growth of labour supply, and not on the rate of savings. Suddenly, even the saving "constraint", together with the question of finance disappeared from the theoretical concern of growth models.[17]

---

[15] This identification between saving and finance has led to very awkward results in the attempts to introduce money explicitly into growth analysis. In neoclassical growth models it is assumed that is the relative rates of return that regulate the allocation of wealth into the several existing assets. Usually two assets are considered: physical capital and money balances. Hence, as we have shown above, growth can be speeded up by decreasing the rate of return on money in relation to the rate of return on capital (e.g. Tobin, 1965; Johnson, 1967; Patinkin and Levhari, 1968). The same sort of argument has led to the theoretical conclusion that growth is faster in a barter economy (where money is not a choice in the allocation of wealth and saving is always channelled towards investment) than in a monetary economy. Therefore financial development is seen as a deterrent to growth.

[16] Actually, there is no independent investment function in Solow's model either.

[17] For a discussion of the evolution of growth theory see Sen (1970) and Simonsen (1991).

I.4. The prior-saving argument in the context of developing economies

The identification of saving with finance in mainstream economics has had a direct consequence on models concerned with finance and development. Capital is commonly assumed to be the scarce factor in LDCs, so saving becomes a constraint to growth (see e.g. Todaro, 1981: 58-63; Simonsen, 1990): the identification between saving and investment becomes the "prior-saving" argument. This is confirmed by a extensive survey on Saving and Economic Development found in the *Handbook of Development Economics*, which begins by the statement by Gersovitz already quoted above (p. 39). That statement is an extreme representative of view that has permeated the discussion of the question about finance and development ever since Gurley and Shaw attempted (and did not manage) to emphasize the "financial aspects of growth". Below we briefly describe this theoretical trajectory.

I.4.1. The Gurley and Shaw heritage

The mainstream literature on finance and economic development owns much to the seminal works of Gurley and Shaw (1955; 1960). For these authors:

> [D]evelopment is associated with debt issue at some points in the economic system and corresponding accretion of financial assets elsewhere. It is accompanied, too, by the *institutionalization of saving and investment* that diversifies the channels for the flow of loanable funds and multiplies varieties of financial claims. Development also implies, as cause and effect, change in market prices of financial claims and in other terms of trading in loanable funds. (Gurley and Shaw, 1955: 515; their emphasis.)

Gurley's and Shaw's debt-intermediation view established a clear interrelation between financial and economic development. First, economic development would be associated with financial development because financial intermediation (external indirect finance) provides potential surplus units with the capacity to spend beyond their earnings. Second, growth would stimulate and be stimulated by the 'institutionalization of saving and investment': income grows, richer wealth-holders will increase their desire to diversify their asset portfolio; if financial innovation is such as to accommodate this "diversification demand", financial institutions can

37

enhance their lending capacity and thus boost growth; the process becomes then a benign circle.

To sum up, financial development enhances the intermediation of loanable funds and therefore growth could be stimulated. In contrast, "Economic Development is retarded if only self-finance and direct finance are accessible, if financial intermediaries do not evolve" (Gurley and Shaw, 1955).

Gurley and Shaw also warned of the dangers of financial development. In their view, the separation between the acts of investment and saving that financial development would permit higher levels of indebtedness and growth; but this would be closely followed by the deterioration of debt profiles, which would result in higher interest rates.[18] Hence financial development widens scope for regulatory management.

Notwithstanding the innovative aspect of the debt-intermediation view the prior-saving argument was still the basic tenet: by putting the banking system with the rest of financial institutions in the passive role of mere brokers, Gurley and Shaw denied their capacity to influence the growth path:

> Neither banks nor other intermediaries create loanable funds. That is the prerogative of spending units with surpluses on income and product account. Both banks and other intermediaries have the capacity to create special forms of financial assets that surplus units may accumulate as the reward for restraint on current or capital account. Banks alone have the capacity to create demand deposits and currency, to be sure, but only savings and loans associations can create savings and loans shares: both "create credit,", both transmit loanable funds, both enable spending units to diversify their portfolios (1955: 521-2).

At the end of the day, it is yet the forces of productivity and thrift which matters in the financing of development. The financial dimension only matters if

---

[18] In their own words: "The portfolios of surplus spending units deteriorate, as bonds or illiquid assets gain relative to liquidity in money form. This decline in the liquidity index of their portfolios may induce surplus units to express a *diversification demand* for additional money balances that does not depend on speculative and precautionary considerations of the Keynesian short-run liquidity preference. With the money supply given, the diversification demand may bring about a rise in interest rates that can depress national income below its initial level ... Because of debt accumulation, equilibrium at the given level of income is threatened. Just as investment may add to output capacity and so jeopardize the level of national income, the issue of debt through the channels of direct finance may have its deflationary impact through the responses of both deficit and surplus units" (Gurley and Shaw, 1955: 515-6; their emphasis).

underdeveloped.

Gurley and Shaw's failure to present a fundamentally different approach seemingly had a high cost: some of their ideas seemed to have been forgotten by the mainstream economics.[19] Indeed development finance has been for the last 30 years mainly treated by development economics as a problem of availability and allocation of internal and external saving. Two models have dominated the literature: the two-gap model and the Shaw-McKinnon model financial liberalisation model.

The two models have different emphases: the two-gap model is concerned with the *external* finance for resources to support development and with development planning; whereas the Shaw-McKinnon deals with the increase and mobilisation of *internal* resources, mainly through the liberalisation and deregulation of internal saving. Both approaches are based on the PS argument. In the subsequent subsections we describe these models, establish comparisons between the two and seek for the common aspects which ultimately link them to the same theoretical roots.

I.4.2. The role of external saving: the two-gap models

The identification of finance with saving is as much rooted in closed-economy macroeconomics as it is in open-economy macroeconomics. For instance, the saving-investment approach to the balance of payments defines "external saving" as the difference between internal investment and internal saving, which is identical to the result in the current account of the balance of payments:

$$Y \equiv C + I + G + (X-M) \qquad (2.1)$$
$$S_e \equiv I - S \equiv M - X \qquad (2.2)$$

where Y stands for income; C for consumption, I for investment, S for internal saving, S_e for external saving, G for government expenditure and (X-M) for the deficit/surplus of the current transactions of the balance of payments (see e.g.

---

[19] As Cameron remarked once that "stimulating and perceptive though it is, the financial institutions are considered [by Gurley and Shaw] to be mere automatons, appearing to supply the demand for financial assets mechanically" (Cameron et al, 1967: 7).

Dismoor, 1990).

The identification of external finance with external saving may seem inconsequential. However, when it comes to policy it shows its importance. For instance, if a continuous deficit problem is interpreted as scarcity of internal saving, then the solution is to increase internal saving. Finally, if the "prior-saving" argument is carried out consistently, interest rates must be raised and internal absorption must be reduced in order to reestablish the external sector equilibrium. This was for instance the line followed by the IMF and the World Bank to the Debt Crisis in the 1980s (see FitzGerald and Vos, 1989; Felix and Caskey, 1990).[20]

An application of the PS argument to the analysis of the role of "external saving" in the context of an open developing economy is the two-gap models. The two-gap models (TGMs) are based on the idea that the lack of internal saving can posit a constraint on economic development.[21] External saving is thus required in two initial stages of development: first, to overcome the difference between planned investment and saving; second, to finance the increasing gap between planned imports and exports. The two gaps are expressed *ex post* by the national account identity:

$$I - S \equiv M - X \tag{3.1}$$

where the left-hand side of the equation represents the investment-saving (I - S) gap and the right-hand side the import-export (M - X) gap. By definition, identity 3.1 is concerned with *ex post* concepts, whereas the TGMs are concerned with the relation of the two gaps with economic growth and with the means to overcome them. The model can be summarised as follows:

---

[20] In a similar vein, recently the World Bank and the International Monetary Fund expressed concerns about the shortage of world savings and its impact on LDC's growth. On this, see Lal (1991).

[21] The two-gap model was initially developed by Chenery and his associates, culminating in Chenery and Strout's (1966) classic article. The article was reviewed by Fei and Ranis (1968), who also provided a simplified version of Chenery and Strout's two-gap models. We have used Fei and Ranis's simplified version here, only changing the symbols V (GNP) for Y and E (export) for X, as used in the rest of this thesis.

- ## The Investment-Saving Gap

$$Y_t = Y_0. \ (e^{rt}) \tag{3.2}$$

$$I_t = (dK/dt) = [(d(k.Y)/dt] = k.r.Y_0.(e^{rt}) \tag{3.3}$$

$$S_t = \alpha'. \ Y_t = \alpha'.Y_0.(e^{rt}) \tag{3.4}$$

$$I_t - S_t = (k.r - \alpha').Y_t = (k.r-\alpha').Y_0.(e^{rt}) \tag{3.5}$$

- ## The Import-Export Gap

$$X_t = X_0.(e^{xt}) \tag{3.6}$$

$$M_t = m'.Y_0. \ (e^{rt}) \tag{3.7}$$

$$M_t - X_t = m'.Y_0.e^{rt} - X_0.e^{xt} \tag{3.8}$$

where r represents the target rate of growth; k is the constant capital output ratio (Y = k.K); α' is the marginal propensity to save; m' is the marginal propensity to import and x the expected rate of growth of exports (determined by the conditions of world trade).

The condition for balanced growth is that (i) the economy starts off from balanced trade; (ii) that r = x; and that (iii) k.r=m'.[22] Since there is no automatic mechanism that will guarantee any of those three conditions, the TGMs conclude that development will be a disequilibrium process. Such a state of disequilibrium cannot be held forever: the continuance of growth depends on the LDC's capacity to raise internal saving or on the supply of external saving. Furthermore, since saving capacity of LDCs is assumed to be limited, foreign aid is desirable in the starting-up of the growth process (Chenery and Strout, 1966; 1968).

The short term disequilibrium between saving and investment will, according to the above-cited authors, be overcome. It is also assumed that once the developing economy has sufficiently increased its per capita income (which allows for a higher propensity to save) and its export capacity (by improving productivity in export sectors), it can finally achieve self-sustaining growth and even repay the debt acquired in complement of financial aid (Chenery and Strout, 1968: 913).

Many Latin American countries launched growth-cum-debt development

---

[22] Notice that either of the two implies the other, ie, if $X_0 = M_0$ then k.r = m'.

41

strategies in the 1970s using as theoretical guidance views which were very similar to the two-gap model. This took the form of proposals to open the countries financially in order to profit from the excess of liquidity of the international financial market of the 1970s (Felix, 1992). The main idea is similar: since the return on capital had to be higher in the underdeveloped countries rather than the developed (due to the former's lower capital intensity), international interest rates would be lower then the prospective returns of investment made in LDCs.

If the observation made in the paragraph above is accepted, it is easy to understand the development within the mainstream view after the so-called debt crisis of the 1980s. For, after the interest rate shock of 1979 and the Mexican *de facto* moratorium in 1982 led to a fast contraction of credit to the highly indebted LDCs, the growth-cum-debt strategy was completely discredited.

Indeed the model has been abandoned in the 1980s, and substituted by the financial liberalisation models, which emphasise the need for LDCs to increase internal saving rather than counting on external saving.[23] The prior-saving argument remained; it was only the historical circumstances that changed.

I.4.3. The Shaw-McKinnon financial liberalisation models

The financial liberalisation models (FLM hereafter), developed after Shaw's (1973) and McKinnon's (1973) classics, have been the mainstream approach to finance and economic development. It has exerted considerable influence on macroeconomic policy in developing countries in the 1970s and 1980s, particularly through the recommendations of the International Monetary Fund and the World Bank.[24]

The analysis is based on the idea that many developing economies suffer from *financial repression*, a "misguided" development strategy of low interest rate ceilings

---

[23] For a summary of the three-fold process of development in the Chenery-Strout model see Fei and Ranis (1968). The latter also strongly criticise what they call the ad hoc mechanical character of those stages (see op. cit.: 907) and the empirical analysis found in the Chenery-Strout model. For a reply see Chenery and Strout (1968).

[24] See for instance the World Bank (1989) Report on Development and Financial Structure.

and selective credit policies. It is argued that financial repression inhibits saving by deliberately maintaining interest rates below their natural level. With financial repression, the argument goes on, even though investment opportunities abound, growth is kept below its potential (e.g. Fry, 1989: 19; McKinnon, 1973: 59-61; Shaw, 1973: 8).[25]

Perhaps the most interesting aspect about most FLM models, is that they are completely devoid of institutional content; they completely disregard the institutional aspects of LDCs financial systems.[26] Thus, within its rationale, solutions to problems related to the financing of development need only consider readjusting relative prices. For instance, the lifting of deposit ceilings is pictured as a panacea that would lead to the establishment of a superior equilibrium position with higher levels of savings, investment and growth. It is also assumed that a less regulated and less "repressed" financial market would equilibrate saving and investment optimally.

The financial liberalisation models as variants of the loanable funds theory

The model presented below (based on Kumar, 1983) is fairly representative of FLMs developed after the original works of Shaw (1973) and McKinnon (1973).[27] First of all an unlimited supply of labour is assumed, so equilibrium output is determined not necessarily at full employment but at the point where the marginal productivity of labour equals an institutionally determined wage deflated by a price index. As usual in this type of model, output is assumed to be at its equilibrium level, so the goods equation is simply dropped, and the discussion centres on the money and saving-investment markets.

---

[25] Other liberalizing recommendations that also commonly follow from this framework are directed towards reducing government's "overcrowding" in the capital markets by tightening fiscal and monetary policies and liberalizing exchange rates. These are meant to reestablish the sovereignty of prices in the allocation of resources.

[26] This "institution-less" approach contrasts even with the seminal work of McKinnon (1973), much of which is devoted to institutional analysis.

[27] For alternative models within the same framework see Galbis (1977), Mathieson (1980) and Cho (1986). Fry (1989) presents a good survey of some other models based on the Shaw-McKinnon framework.

Investment is still a function of the marginal productivity of capital, but the saving function is restated. It is claimed that the lack of diversified financial markets implies no alternative for savings other than in physical capital and bank deposits. Furthermore, following McKinnon's (1973: 57-61) hypothesis of money-capital complementarity, investment is assumed to be indivisible and hence a lump-sum expenditure.[28] So individual deposits are also used for the accumulation of savings in order to finance a minimum investment level (I_{min}).

In his model, for instance, Kumar assumes that "the net acquisition of real cash balances [d/dt(M/P)] by savers is channelled via bank credit to either private borrowers who wish to accumulate capital [I_b], or to government for current consumption [G]". Investment can be either self-financed (I_s) or financed by the loanable funds intermediated through the banking system (I_b). Finally, the total supply of loanable funds available for private investment equals the newly created money balances (d/dt(M/P)) minus the part appropriated by government to finance consumption (G). Thus the following flow of funds equation can be written:[29]

$$S + G = s'.Y + m^*, \quad m^* = \frac{d(\frac{M}{P})}{dt} \qquad (4.1)$$

$$I_s = s'.Y$$
$$I_b = m^* - G$$
$$IF = I_s + I_b = S$$

where Y stands for current income; s', for private propensity to save out of current income;[30] m^*, for the additional money balances created by the banking system and held by savers; M, for nominal money balances held by savers; P, for price index; G, for increase in real cash balances appropriated by the government for

---

[28] For a review of McKinnon's hypothesis of money-capital complementarity within a three period life-cycle model, see Molho (1986).

[29] The model presented below assumes a closed economy and all variables (except M and P, obviously) are expressed in real terms.

[30] In reality, in Kumar's (1983: 22) model this "private saving" corresponds to the real aggregate profit - that is, equal to the total income minus the wage costs (as usual other costs are ignored).

current consumption purpose; S, for aggregate saving;[31] and IF, for aggregate supply of funds available for investment.

Sources of finance are thus basically savings from current income and real balances accumulated in the form of bank deposits. On the demand side, government and private sectors compete for the existing loanable funds. Finally, investment is a function of the average return to physical capital (r_k) and the real deposit rate (r^*), where r is the deposit interest rate (r) and π^e is the expected rate of inflation:

$$I = f (r_k, r^*), \quad r^* = r - \pi^e ; \quad f_{r_k} > 0, \quad f_{r^*} < 0 \qquad (4.2)$$

In this simplified model, the banking system is simultaneously a broker of capital and a supplier of the means of payments. Deposits are demanded for saving (and investment) and transactions, and hence the real demand for money function L($\cdot$) - assuming it is homogeneous of degree one in Y - is as follows (after Kumar, 1983: 21):

$$\frac{M^d}{P} = L (r^*, y) ; \quad L_1 > 0 , \quad L_2 > 0 \qquad (4.3)$$

Here, y stands for output and the deposit interest rate appears as a central variable. Once the money supply (M^s) is exogenously given by the monetary authorities, equilibrium in the money market is given by:

$$M^s = P.L(r^*, y) \qquad (4.4)$$

Assuming adaptive expectations, a once-and-for-all expansion of money supply can only affect money demand during the period of adjustment of expectations. As in the loanable funds approach, any increase of money supply beyond the "desired" level of savings (which here can only assume the form of bank deposits) would only result in inflation in the long run.

---

[31] In Kumar's model, aggregate saving is defined as the "social propensity to save out of income" (s = s' + {d/dt(M/P)}/Y - G/Y) multiplied by current income (Y).

In such models, a policy of financial repression would seek to maintain the real deposit interest rate below its (positive) equilibrium levels. Such a policy would result in the rationing (non-price allocation) of scarce saving - which is seen as a fertile ground for inefficiency and an easy source of windfall profits to the banking system (Fry, 1989: 18). When associated with government deficits, it would reduce the availability of scarce resources to the private sector - and hence leave savings to be unproductively allocated by the short-sighted bureaucracy.

Hence, the argument continues, the appropriate financial policy in the context of LDCs has to focus on incentives to increase the real demand for money in the form of deposits - that is, to raise real deposit rates. This would expand the resources (loanable funds) necessary to finance current investment, and provide 'small investors' with a way of accumulating saving for investment in a less inflationary manner. Furthermore, such a policy of financial liberalisation would unify the capital market, increase the return to domestic savers and allocate this enhanced saving to higher-return (more productive ?) projects, besides eliminating other forms of fragmentation.[32]

I.5. Conclusion

Mainstream development economics has, in the last thirty years or so, moved from the view that external saving was required in the first stages of development (the two-gap model) to one which privileges policies towards increasing internal saving in order to achieve sustained growth (the Shaw-McKinnon liberalisation model). Even though these models present different prescriptions to the problem of financing development, both share the same unifying principle (the prior saving argument).

The identification of finance with saving is neither new nor unquestionable. For instance, already in 1937, Ohlin, in a well-known debate with Keynes and others on finance, investment and saving, had expressed a position identical to that of

---

[32] For instance the technological disparity between modern and traditional sectors in LDCs is commonly associated with selective credit policies, which encourage the choice of capital intensive technologies, despite the existence of abundant labour. Since non-priority sectors do not receive subsidised credit, the technological gap would tend to widen with financial repression (Fry, 1989).

supporters of the financial liberalisation literature:

> If an authoritarian government fixes a rate of interest which is much lower than the rate which would prevail in a free market, then during any period saving and new investment *ex-post* are nevertheless equal, but the quantity of credit *offered* is found to have been smaller than the quantity *demanded*; some form of "rationing" takes place. **The credit market reacts in the same way as the commodity market, when maximum prices are fixed** (Ohlin, 1939b: 424; italics in the original, my emphasis).

This view was insistently criticised by Keynes, among others, as a fallacious foundation for analysing of the financial dimension of a market economy. Keynes's critique is based on an alternative view of the laws of motion of a market economy (the monetary-production economy paradigm) and the finance-investment-saving-funding circuit. In the next three chapters, we build on this critique to present a Post Keynesian view of finance and development.

II. DEPARTING FROM THE PRIOR-SAVING ARGUMENT: FINANCE IN A MONETARY PRODUCTION ECONOMY

II.1. Introduction

In the previous chapter it was established that the unifying principle of most models of finance and development is that saving is a pre-condition for accumulation. It was also indicated that Keynes's disputing view (that is that finance and investment precede saving) would be used in this thesis as the starting point of an alternative approach.

In this chapter the foundations of Keynes's and Post Keynesians' views on finance are discussed. The chapter is organised as follows: section II.2 sets out the principles behind Keynes's paradigm of the monetary-production economy and shows why investment is the *causa causans* of output and employment in this paradigm. The determinants of investment are considered in sections II.3 (long term expectations) and II.4 (the rate of interest). In addition, section II.4 argues the case that Keynes's view on finance is deeply rooted in his perception of the stage of development of the banking system. Section II.5 builds on the conclusions of section II.4 to stress the fact that banks (and not savers) are the suppliers of finance, and presents a simplified model of the banking firm under uncertainty. Section II.6 addresses the consequences of the Post Keynesian view on finance for open-economy analysis. Section II.7 summarises the findings and presents the conclusions of the chapter.

II.2. The starting point: the monetary production economy

II.2.1. The law of production in a monetary production economy

Neo-classical economics presumes what Keynes called a real-wage or co-operative economy. As the name suggests, in such an economy, production is organised co-operatively and the output distributed in kind: "the factors of production

are rewarded by dividing up in agreed proportions the actual output of their co-operative efforts" (Keynes, 1979: 78). If money exists in such economies, it acts as a mere medium of exchange. Keynes called this a neutral economy. It behaves like a barter economy. In such a barter economy, investment can only take place if sufficient saving/capital is made available for investment.

In contrast, Keynes's theory is based on what he called the monetary-production-economy or entrepreneur economy. In a monetary production economy, the means of production are privately owned and production takes place through the entrepreneurs' hiring of labour. Because output is not directly distributed to workers and because this is a decentralised economy, contracts (between entrepreneurs, workers and suppliers) are essential components of this economy. These contracts must be denominated in an accepted medium of exchange. Finally, because money is at the same time a widely accepted medium of exchange and a store of value, it has the power to discharge contracts. Money allows the entrepreneur to have access to the physical resources and labour required for production,[33] thus whoever has the capacity to create money (e.g. the State and banks), can finance production.

In entrepreneur economies, production is a time-consuming activity, which requires that entrepreneurs commit (their own or borrowed) resources before the return on the output is known - the entrepreneur economy is essentially a forward-looking system. The law of production of an entrepreneur economy is thus defined as follows:

> [A] process of production will not be started up, unless the money proceeds expected from the sale of the output are at least equal to the money costs which could be avoided by not starting up the process (Keynes, 1979: 78).

This law is what guides Keynes's principle of effective demand.

---

[33] Money is also important because it provides its holder with the ability to postpone consumption or investment decisions. More on this below.

II.2.2. The principle of effective demand

The principle of effective demand represents, according to Keynes himself (1936: 25), the substance of his general theory of employment. Although detailed examination of this principle is beyond the scope of the present thesis, some analysis is nevertheless in order.[34]

In a nutshell, the principle maintains that the level of output and employment will be determined at the point where the expected aggregate demand curve intersects the aggregate supply curve. The aggregate demand curve (D) for a closed economy with a small government can be defined as follows:

$$D = C (N,w) + I (r,E) \tag{1.1}$$

where C stands for consumption; N for the amount of employment; w for the average wage; I for investment; r for the rate of interest and E the state of long-term expectations.

The aggregate supply curve Z represents the aggregate cost of producing an output Q, which is obtained by multiplying the marginal cost, MC, by the level of output. Since the cost is assumed to be composed solely of wages, then

$$MC = \frac{d(w.N)}{dQ} = w.\frac{dN}{dQ} = \frac{w}{Q'} \quad \text{so that}$$

$$Z = \frac{w}{Q'}.\frac{Q}{N}.N = \frac{A}{Q'}.w.N \tag{1.2}$$

where A stand for the average physical productivity of labour and Q' for the marginal productivity. Assuming diminishing returns, Z will increase with N, but at a faster pace (Figure II.1).[35]

Figure II.1 illustrates Keynes's principle of effective demand. Starting from

---

[34] For a detailed examination see Amadeo (1991).

[35] As Chick (1983: 65-6) points out three assumptions are required to obtained the Z curve of Figure II.1: (i) atomistic firms; (ii) labour is the only variable factor of production to be taken into account; and (iii) the composition of output and demand does not change with the overall volume of output, Q.

Figure II.1 - Keynes's principle of effective demand (after Weintraub, 1979)
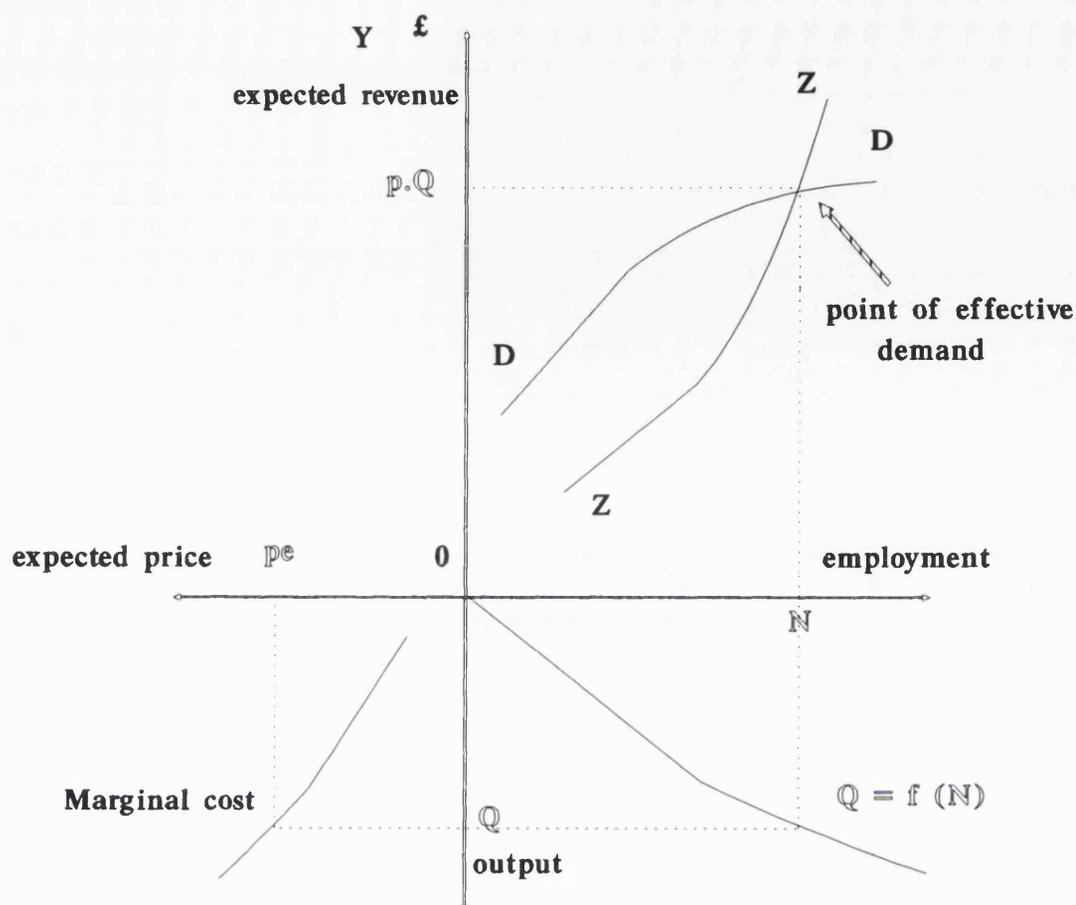
the third quadrant, the marginal cost curve is drawn by assuming that the costs of production are known and returns are diminishing. The profit-maximising output is found at the point where the price entrepreneurs expect to receive from their products (p^e) equals the marginal cost of producing them.

Once the level of output is determined, the amount of employment will be determined by a function (f) associating the level of output and employment (second quadrant). The marginal cost and the level of output determine the Z curve, whereas the level of aggregate demand (D) will be partly determined by the consumption out of income corresponding to employment offered by entrepreneurs (N) (first quadrant). The point of effective demand will be that where D and Z intersect.

Keynes uses the principle of effective demand to deny the classical assumption that a market economy is a self-correcting system gravitating around full employment. He explicitly criticised the view that wage flexibility would automatically bring the economy out of a recession. To the contrary, Keynes claimed, a decline of wages

51

would affect the aggregate supply curve as much as the aggregate demand curve, and therefore the equilibrium result was neither necessarily full-employment nor stable. For Keynes, the cyclical pattern of a capitalist economy had more to do with the volatility of investment than the "rigidities" of the labour (or indeed any other) market. This is the topic of our next section.

II.3. The role and determinants of investment

The General Theory is largely dedicated to examining the various factors upon which these two functions (D_w and Z_w) depend. However, after a lengthy exposition on 'definitions and ideas' (1936: 35-85), Keynes spends 42 pages explaining the determinants of consumption and dedicates another 109 to the determinants of investment. The reason for this imbalance is well-known: Keynes considered investment, of all the components of aggregate demand, to be the most volatile; whereas consumption can be assumed a stable function of income without losing much theoretically. In turn, investment is assumed to be the independent variable in 1.1. - - and thus *causa causans* in the determination of employment and output. The reasons why investment is potentially more volatile than consumption is discussed below.

II.3.1. Long term expectations

In the chapter of *The General Theory* dedicated to long term expectations, Keynes attributes two sorts of uncertainties which make investment volatile. First, he emphasises the tenuity of the basis of knowledge for forecasting the yield of an asset that takes many production periods to become productive.[36] The second source of instability is, according to Keynes, the close relation between stock prices and the evaluation of investment opportunities by the entrepreneurs. While the first of Keynes's assumptions is relatively straightforward, the second needs elaboration.

---

[36] In Keynes's words: "our basis of knowledge for estimating the yields ten years hence of a railway, a copper mine, a textile factory, the goodwill of a patient's medicine, an Atlantic liner, a building in the City of London amounts to little and sometimes nothing; or even five years hence. In fact, those who seriously attempt to make any such estimate are often so much in minority that their behaviour does not govern the market" (1936: 149-150).

The financial cost of reversing an investment decision in the early stages of capitalism was normally very high, and sometimes such reversion might not be possible. However, the evolution of organised investment markets changed the necessary long-term commitment of investment (Keynes, 1936: 150-1). Because firms could be bought through mergers and take-overs, the volume of new investment became highly influenced by changes in stock prices. For,

> there is no sense in building up a new enterprise at a cost greater than
> that at which a similar existing enterprise can be purchased; whilst
> there is an inducement to spend on a new project what may be seem
> an extravagant sum, if it can be floated off on the Stock Exchange at
> an immediate profit (ibid: 151).

Keynes's concern with the negative role played by speculation on investment decisions is an important part of his investment theory. However, this should not shadow the basic message of this theory: that the return on any productive activity in a decentralised economy is, almost by definition, uncertain. The wider the gap between the decision to commit resources and the return on the capital used, the higher the level of uncertainty. Given the fact that investment generally involves long-lived assets, investment is potentially very unstable.

II.3.2. The rate of interest

Another way to address the determinants of investment in Keynes's principle of effective demand is found in chapter 17 of *The General Theory*. The importance of this chapter is that, amongst other illuminating insights, it clarifies the role of money and the rate of interest in Keynes's investment theory.

In the above-cited chapter Keynes distinguishes assets by their 'own-rates' of return, consisting of:

(1) the rate of quasi-rents expected to be earned from its use or possession (q);

(2) the ratio between the expected carrying cost (involved in holding an asset over time) and its spot price (c);

(3) the expected rate of change of its forward price in relation to its spot price (a); and

(4) the liquidity-premium, or the implicit cost of converting the asset into a means of

payment (1), both in terms of the opportunity-cost involved in the time required to sell it and the transactions-cost in such an operation.

The equilibrium solution in the asset market requires that all assets' own rates be equal. That is, for every asset i or j:

$$a_i + q_i - c_i + l_i = a_j + q_j - c_j + l_j \qquad (2.1)$$

Keynes defined the maximum liquidity premium as being that attributed to money whereas all other assets share that attribute in a descending scale. Following Carvalho (1992: 89) the variable r is used here as the measurement of risk (which, as that author reminds us, should not be confused with probability risk) ascertained for each asset according to the expected losses in money terms involved in its conversion into a means of payment. With this amendment, the starting point of the ascending scale is the return on the most liquid asset.

Money is the liquid asset par excellence. Hence, by definition its carrying cost is negligible, whereas its liquidity premium is the highest among all assets. If money is the nth asset, the equilibrium solution for the n-1 assets existing in the economy is the following:

$$a_i + q_i - c_i - r_i = q_n - r_n \qquad i = 1 \dots n\text{-}1 \qquad (2.2)$$

Assuming increasing carrying costs (c) and decreasing marginal returns (q), the own rate of each non-monetary asset declines as its stock increases. Given that equilibrium stocks are adjusted so that all the own rates must be equal, the asset with the most slowly declining own rate will set the floor for expected returns: all the other own rates will eventually have to conform with this asset's own rate (Winnet, 1992: 58).

Keynes identified money as the asset which has "the most slowly declining own rate", because of its intrinsic characteristics: zero-elasticities both of production and of substitution. The explanations of these characteristics are found in the determinants of the demand for money and the way money is supplied in economies with developed banking systems. These are the topics of the next section.

II.4. The determinants of the demand and the supply of money

II.4.1. The demand for money

If uncertainty could be ruled out, there would be no reason to hold money balances either for transactions purposes or as a store of value. Theoretically all transactions could be contracted in advance and delivered in the future according to those contracts. In an uncertain environment, money is demanded both as a means of payment for current and forward contracts and as an asset. Let us consider first the demand for money as a means of payment.

In an economy where both the organisation of production and the distribution of its fruits are based on contracts, money balances are held because of their power to discharge contracts (the transactions motive)[37] and/or as stores of value to be used for unexpected expenses (precaution motive). This means that the demand for money on these accounts is determined by both the current and the expected levels of activities (Davidson, 1978: chapters 7 and 8).

Expectations are also an important factor in the demand for money as an asset (the speculative motive) - a demand which is guided by the perceived opportunities of capital gain in financial markets. The speculative demand for money mirrors the state of expectations of the agents in financial markets and changes with shifts in liquidity preferences.

In *The General Theory* the demand for money on transactions and precautionary accounts is assumed to be relatively stable in relation to the level of activities. In contrast, the speculative demand is deemed relatively more volatile (Keynes, 1936: 172). By the method similar to that employed in his investment theory, this artifice allows Keynes to single out the speculative motive as the *causa causans* in the determination of the demand for money. However, as many Post Keynesians (e.g. Davidson, 1978 and Carvalho, 1992) rightly point out, the liquidity

---

[37] As Carvalho (1992: 100-1) points out, even spot transactions involve a contract by which one party is committed to the immediate delivery of a certain good/service and the other to the immediate payment. See also Keynes (1930, I: 4).

preference theory should be seen in the context of wider demand for finance.[38] At different circumstances, distinct motives behind the demand money will predominate. But the important interrelated factors which link all those motives remain uncertainty and changing expectations.

II.4.2. The supply of money and the stages of the banking system

In *The General Theory*, "whilst it is found that money enters into the economic scheme in an essential and peculiar manner, technical monetary detail falls into the background" (Keynes, 1936: vii). Indeed, Keynes's insights into the financial dimension of what he later called a monetary production economy are almost all found in the *Treatise on Money*.

The starting point of Keynes's analysis is obviously the 'institution' of bank-money. The establishment of private money-creating institutions was a long process in most of the now developed countries (see e.g. Cameron et al, 1968; 1972). Keynes summarised this process as follows:

> [T]he introduction of money of account gives rise to two derived categories - offers of contracts, contracts and acknowledgements of debt, which are in terms of it, and money proper, answering to it, delivery of which will discharge the contract or the debt. The first of these prepares the way for the next development, namely the discovery that for many purposes the acknowledgements of debts are themselves a serviceable substitute for money proper in the settlement of transactions. When acknowledgements of debt are used in this way, we may call them bank money - not forgetting, however, that they are not money proper. Bank money is simply the acknowledgement of a private debt, expressed in the money of account, which is used by passing from one hand to another, alternatively with money proper, to settle a transaction. We thus have side by side State money or money proper and bank money or acknowledgements of debt (1930: 5).

Second, the wider acceptance of bank-notes as a means of payment provided banks with credit-creating capacity:

> There has been, indeed, during the past hundred years a steady evolution away from the use of notes to the use of cheques; and the

---

[38] Keynes himself explicitly corroborated this interpretation in his discussion of the finance motive (e.g. Keynes, 1939: 283-4).

proportion of bank deposits, which in any country we may expect to represent savings deposits, business deposits and income deposits respectively, depends on the stage in this evolution which that country has reached. In the first stage bank deposits are mainly in the nature of investments, most payments being made by notes. In the second stage bank deposits are partly used as a means of holding cash but are generally turned into notes when it comes to making a payment. In the third stage, business transactions are mainly done by cheque, the use of notes being limited to wage-payments and petty cash. In the fourth stage wage payments also are made by cheque, and notes are employed for little except petty cash and out-of-pocket expenditure. Most continental countries are between the second and third stage (Keynes, 1930: 35).

The evolution of privately issued money is critical in understanding the relevance of Keynes's assumption of the independence of finance from saving. For as Chick (1983; 1986) has shown in her theory of the development of the banking system, only in a very early stage of this development do banks depend on previous deposits to create credit. Only in this first stage (Chick's stage 1), are banks' notes restrictively accepted for settling transactions and loans totally backed by previous deposits. Hence, only in this stage do deposits necessarily precede loans and hence saving precedes investment.

In Chick's stage 2, however, notes and/or claims on deposits are widely accepted as a means of payment, and thus deposits are made for transactions as well as for saving reasons. In this second stage, banks manage their balance-sheet positions on the basis of the idle balances maintained by depositors, so that daily accruing assets in the shape of cash and claims are as near as possible equal to their daily accruing liabilities (Keynes, 1930).

Bank money creation becomes either a passive or an active book-entry operation: it is passive if "a member of the public comes along with cash in his pocket or with a cheque drawn on a bank, which he hands in on the understanding that he is entitled in return to a claim to cash (i.e. a deposit) which he can either exercise or transfer to someone"; it is active if the bank creates a claim against itself in favour of a borrower, in return for his promise of reimbursement (Keynes, 1930: 20-1).

In stage 1, passive deposit-creating dominates, whilst active deposit-creation is the norm in stage 2. In the active deposit creation, if cash reserves are depleted

below a certain minimum "margin of safety" (determined by banks' expectations and the institutional structure), banks can borrow surplus reserves from each other, sell other assets, or even borrow directly from the money market against certificates of deposits. Given banks' credit-creating capacity, in a stage 2 it is banks, and not savers, who provides finance.

II.4.3. The liquidity preference theory in an economy with a developed banking system

In an economy with a stage-2 or higher banking system, money can be created by two basic means: through open market operations and by banks' creating deposits. Thus the supply-side of Keynes's liquidity preference theory can be told in two complementary "versions". In the first version, money is created by an open market operation. Assuming that the liquidity preference is unchanged, an increase in the money supply caused by such an operation will have a direct effect on bond prices and, therefore, on the money interest rates.

In the second version, money is created by banks. In this case, an increase in the money supply has no direct effect on prices of financial assets. Even if banks' reserves are unchanged, banks can create additional deposits, which are exchanged for the IOUs of borrowers and then transferred once the money is spent. Hence, the effect of this operation will depend on how the recipient of such a deposit uses it. If the additional deposit is used for the acquisition of a good or service, the additional deposit will enter what Keynes called in the *Treatise* the industrial circulation, that is, the turnover of goods and services of the economy. This will generate the multiplier process which may cause an increase in output, of prices or of both - depending on the level of the use of productive capacity. If it is used to buy, say, bonds, then the effect on the interest rate will be similar to an open market expansionary operation. Finally, if the deposit is hoarded, there will be no immediate effect on the rate of interest.

Therefore, in Keynes's theory the interest rate is neither determined by the forces of productivity and thrift, nor is it the variable that guides the allocation of capital. As much as finance precedes saving, the interest rate is a monetary

phenomenon, conjointly determined by monetary policy, banks' credit policies and the liquidity preference of asset-holders.

II.5. Finance precedes saving: the consequences for the hierarchy of the monetary production economy

II.5.1. Banks as suppliers of finance

The existence of stage-2 credit-creating banks provides the monetary production economy with a flexibility and capacity for accumulation inconceivable in a barter economy.[39] It also increases the complexity of the process of investment finance: the funds available for investment represent only a segment of the pool of funds created by the banking system to finance several activities - from the production of consumption goods to stock exchanges (Keynes, 1939: 283).

In turn, since finance and production decisions precede the creation of employment and income, the hierarchy of agents in a monetary production economy is such that entrepreneurial and banks' decisions predominate consumers/savers' decisions. In contrast to the view that saving precedes finance, some Post Keynesians assume that the supply of money is always horizontal (e.g. Moore, 1988; 1989). In a way, this horizontalist view contradicts Keynes's view that "banks hold a key position in the transition from a lower to a higher scale of activity" (Keynes, 1979: 222): if finance is always forthcoming, what is so important about the role of banks in the dynamics of the monetary production economy? In order to clarify the matter, a simple model of the banking firm under uncertainty is presented below.

---

[39] On this see also Schumpeter (1934).

II.5.2. A simple model of the banking firm under uncertainty

One of the most basic lessons of the traditional banking multiplier is that the supply of deposits will depend on the level of reserves (R) made available by the central bank. Assuming insignificant operational costs and a perfectly competitive environment, the banking firm would expand its loans (L) to the limit set by the reserves ratio (r=R/D). Therefore, the money supply is totally determined by the level of reserves made available by the central bank to the banking system.

As Heise points out, the following assumptions underline this type of multiplier: "(1) agents must have information about possible yields (as opportunity costs of holding money); (2) agents must have information about the density function of net bank withdrawal (as expected liquidity); and (3) agents must have information about future costs of restoring liquidity" (1992: 292 ftn). In other words, uncertainty must be assumed away.

From a Post Keynesian perspective, the conventional banking multiplier is a fallacious description of the behaviour of a banking firm. Under uncertainty, competition implies that the individual bank's credit-creating capacity must be sufficiently elastic so that it can face an eventual change in its clients' demand for credit.[40] Similarly to other economic agents, banks maintain voluntary reserves and other liquid assets (such as marketable securities) in their portfolio for precautionary reasons.[41]

Let us consider a simple version of a bank's balance-sheet: on the assets side we have reserves (R), liquid assets (A) and loans (L). These must equal deposits (D) on the liabilities side:

$$R + A + L \equiv D \qquad (3.1)$$

---

[40] This of course is even more true in an overdraft system, where banks must accommodate any level of their clients' demand for credit within pre-arranged credit (or overdraft) limits. However, one may imagine that even in a lend-over-the-counter system, a bank's refusal of a good client's demand for additional credit can cost it the loss of clientele, especially in times of expansion.

[41] Of course the level of voluntary reserves in the form of cash that banks hold is also influenced by the stage of development of financial markets. In a very developed financial market (such as in Chick's stage-5) bank loans become themselves marketable securities, so that the level of reserves can be dramatically reduced.

Even though the compulsory reserves ratio is determined by the monetary authorities, the "liquid assets ratio" (α = A/D) will be determined by the strategies of competition of banks and their liquidity preferences. Therefore loans can be defined as:

$$L \equiv (1 - \tau - \alpha).D \tag{3.2}$$

where τ is the ratio of compulsory reserves over deposits. Equation 3.2 may seem similar to the traditional multiplier, however it is different in fundamental ways. This equation expresses the view that, until our bank has liquid assets ($\tau > 0$), an increase in its loans can be achieved without depletion of reserves. In other words, in case of a fast expansion of loans, α can remain constant while τ declines.

The decline of τ after a certain point (when voluntary reserves equal compulsory reserves), occurs more rapidly than the increase in the deposits created, so that the point where $\tau \approx 0$ can be rapidly reached.[42] However, until this situation (i.e. $\tau \approx 0$) is reached, the supply of loans may be perfectly elastic. For each level of expectations of the banking system, the supply of loans schedule (L^s) can be seen as horizontal until τ approaches 0, when it rapidly becomes vertical.

As mentioned earlier, some Post Keynesians view this credit-creating capacity as the loss of the discretionary power of the banks in determining their overall levels of lending. For instance, Moore (1988; 1989) maintains that (1) bank loans are essentially demand-determined due to pre-arranged credit facilities (such as overdraft facilities); (2) there is an asymmetry in the capacity of the monetary authorities to

---

[42] This can be demonstrated as follows:

$$\tau + \alpha + \frac{L}{D} = 1 \ \ thus \ \ \epsilon_{\tau,D} = \frac{\frac{\delta\tau}{\tau}}{\frac{\delta D}{D}} = \frac{\frac{L}{D} - \frac{\delta L}{\delta D}}{D} \cdot \frac{D}{\tau}$$

$$since \ \frac{L}{D} = 1 - \tau - \alpha \ \ and \ \ \frac{\delta L}{\delta D} = 1 - \tau$$

$$then \ \epsilon_{\tau,D} = - \frac{\alpha}{\tau}$$

From the point when the level of voluntary deposits (τ) equals that of the compulsory deposits (σ), then $\epsilon_{\tau,D} < -1$, that is, the bank's security margin declines at a higher pace than the increase in deposits.

influence the level of growth of money stock (central banks can increase it but do not have the ability to reduce it); (3) monetary authorities, having to fulfil their basic role of lender-of-last-resort and thus their obligation to maintain the liquidity of the system, do not have discretionary control over their own liabilities.

Moore's argument is correct in most circumstances in developed economies. However the horizontalist view lacks the generality to encompass the active role played by banks in inherently uncertain environments. This is where the Keynes's (1936) "state of confidence of banks" (expectations) enters the scheme. As Goodhart (1989) points out in his reply to Moore:

> [Moore] is correct ... with respect to individual borrowers and in the short-run "tactical" context. But banks' medium term and longer term "strategic" decisions to enter and contest this or that credit market (e.g. mortgage lending to persons, syndicated loans to LDCs, etc) are of major importance in determining the form and shape of the banking system and its influence on the economy. Of course such decisions are largely shaped by the regulatory and structural context, available technology, etc., but they remain bankers' decisions.[43]

As regards the determination of the lending interest rate, the behaviour of the banking firm will also be affected by uncertainty. In an uncertain environment, where firms do not know the shape and location of their cost and demand curves, the most common pricing procedure is mark-up pricing.[44] This is exactly how the banking firm is seen to proceed here.

In our model, the banking firm will ascertain some percentage mark-up (m) on its normal average cost, which here we assume to be proportional to the basic rate determined in the money market. Bank deposits compete with other liquid assets, such as bonds, hence in equilibrium the deposit rate would equal the rate paid on bonds. The average cost of deposits (r_d) depends on the relation between interest-bearing and

---

[43] See also Winnet (1992) and Carvalho (1992).

[44] See, among others, Moore (1989) and Heise (1990). In perfectly competitive environment with no uncertainty, in the long run the profit-maximizing lending rate (r_l) would be set according the average deposit rate (r_d) and the reserves ratio (τ):

$$r_l = \frac{r_d}{1 - \tau}$$

Figure II.2 - Loans: interest rates and supply and demand schedules
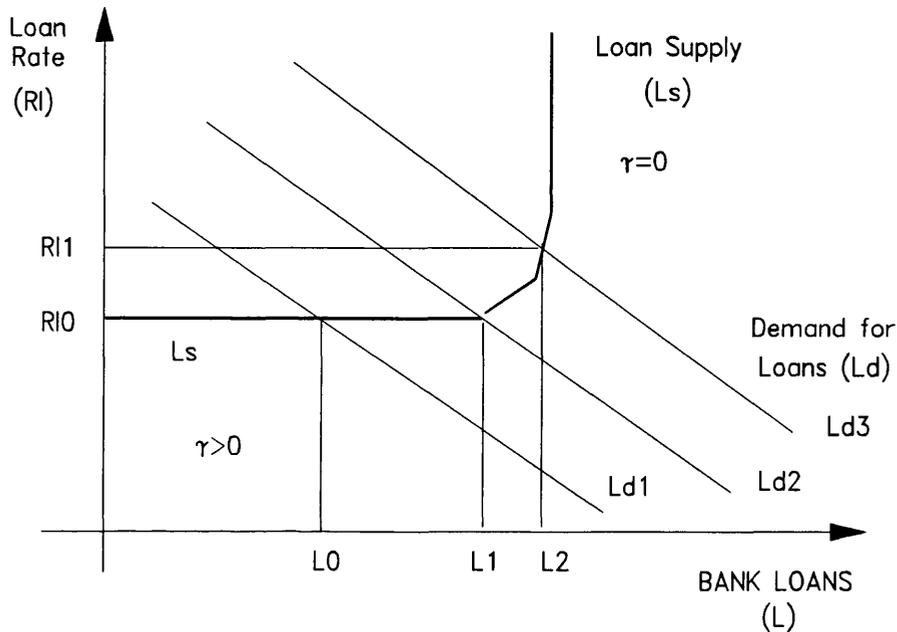
non-interest-bearing deposits held by the bank.[45] The lending rate of interest (r_l) will then be:

$$r_l = (1+m).\frac{D}{L}.r_d$$

or, what is the same,

$$r_l = (1+m).\frac{r_d}{(1-\tau-\alpha)} \qquad (3.3)$$

As said earlier, an increase in loans can be achieved without depletion of reserves through the selling of liquid assets. However if the voluntary reserves fall by too much (i.e. $\tau \approx 0$), banks will have to bid for additional reserves. If the wealth-

---

[45] In an uncertain world, the banker must also consider in the calculus of r_l the average risk of voluntary or involuntary default of their borrowers (the lender's risk). For the sake of simplicity of the argument, we assume here that this risk is unchanged and is incorporated into the mark-up (m). When we talk about inflation, though, this assumption will be released with no harm to the central argument.

owners' average liquidity preference remains unchanged, this will result in an increase in the basic rate of interest.

To sum up, our analysis thus far proposes that banks' capacity to expand loans before deposits is very elastic. However, we can consistently assume that, as banks approach their "full capacity" ($r=0$), the supply of loans will become vertical. Banks will only be stimulated to increase their loans if they can increase their lending rate at the margin in order to cover the costs of bidding for additional reserves.

II.6. Finance in the context of an open economy

In the previous chapter (section I.4.2), it was established that the prior saving argument is as much rooted in closed-economy macroeconomics as it is in open-economy macroeconomics. It is pointed out, for example, that it is common to identify all net capital inflow as the use of "external saving". From a Post Keynesian perspective, the distinction between finance and saving must also be applied to the analysis of the role of external debt in financing development - especially in these times, when multinational credit-creating institutions are a part of the world scenario.

A good and relevant example to illustrate the need for this distinction is that of an economy with under-developed or nonexistent internal mechanisms to finance long-term projects.[46] If investors can find better credit conditions abroad, they will borrow in foreign currency, irrespective of their need to import additional resources (or of "external saving").

Assume that this hypothetical country is going through an investment boom, departing from an equilibrated current account. If part of the investment finance is obtained through borrowing in foreign currency, the stock of external debt will increase concomitantly. The country's capacity to repay will not rise immediately - even if such external debt is used to finance expansion of export sectors, which will allow the country to repay its debt in the future. Once the stock of external debt has

---

[46] This is the case when capital markets are underdeveloped or nonexistent. For reasons that will be discussed in the next chapter, in this case lender's and borrower's risks will be greater. In turn, banks will restrain from financing long term positions and borrowers will search for alternative sources of finance.

increased, the financial charges also rise and this will produce a deficit in the current transactions account. Can this be accounted for as use of "external saving" ?

Our example shows just how misleading the identification of finance with external saving can be if applied for analytical purposes. But, if such an identification is used for policy recommendation, it can be truly dangerous. For instance, if the increase of external debt is interpreted as a proof of scarcity of internal saving, then the solution is to increase internal saving. Finally, if the prior-saving argument is carried through consistently, interest rates must be raised and internal absorption must be reduced in order to reestablish the external sector equilibrium. This adjustment is almost necessarily recessive; and, as if recession were not enough, the structural problem (the lack of indigenous mechanisms to finance investment), which caused the rise in external debt, will remain, and long term growth may be still threatened.

One way of overcoming this analytical difficulty is to redefine the balance of payments so as to distinguish between what represents real resources transfer from other factors affecting the international capital inflows. This will be discussed in chapter V, which deals with the method of analysis of the case-study.

II.7. Conclusion

In this chapter the foundations of Keynes's assumption (that finance and investment precede saving) have been discussed. In addition the consequences of such an assumption in the analysis of finance in market economies have been addressed.

It has been established that the foundations of the Post Keynesian view on finance is the financial dimension of Keynes's paradigm of the monetary production (entrepreneur) economy. In an entrepreneur economy, the means of production are privately owned, so that production is organised by a profit-seeking class through hiring labour. Assuming that the costs of production are known, output decisions will depend on the expectations of demand.

Since time is irreversible and production must precede demand, production decisions have to be taken in an inherently uncertain environment. Uncertainty is common to any decision regarding production; however the return on long-lived assets is more uncertain than the return on current production. This makes the

volatility of investment greater than the production of other goods. Furthermore, marginal investment is not financed by current income. Therefore investment is deemed to be the *causa causans* in the determination of output and employment.

In an entrepreneur economy, finance and investment precede saving. This brings us to the financial dimension of the monetary-production economy. It has been shown that in an economy with a developed (stage-2 or higher) banking system, banks can create credit independently from previous deposits. This makes the banking system second in the causal hierarchy in the determination of the level of investment. Saving can only play a role in this hierarchy as part of the determinants of asset prices and thus the interest rate. However, given that financial markets are dominated by stocks rather than flows, the role of saving is limited. More important in the determination of interest rates are the wealth-owners' liquidity preferences and monetary policy.

To sum up, Keynes's and the Post Keynesians' assumption of the precedence of finance and investment over saving completely changes the hierarchy in the process of accumulation in market-oriented economies. Finance and investment decisions are the main determinants and consumption decisions are relatively secondary - though they have an important role in determining the level of aggregate demand.

What is apparently played down by the Post Keynesian analysis is the role of saving, whereas the financial markets are seen with a hint of disguise. The next chapter will show that saving and consequently the financial markets have a fundamental place in the dynamics of the monetary production economy. Therefore this role must be addressed by Post Keynesian theory - especially in models concerned with finance and the processes of growth and development.

III. GROWTH, FINANCIAL FRAGILITY AND FUNDING: THE ROLE OF SAVING AND FINANCIAL MARKETS FROM A POST KEYNESIAN PERSPECTIVE

III.1. Introduction

In the previous chapter the implications of the following three propositions, which are common assumptions in most Post Keynesian analysis, have been analysed in the context of development: (1) investment is the causal determinant of output, employment and income; (2) from a macroeconomic standpoint, banks, and not savers, play the most fundamental role in the process of finance; and (3) the rate of interest may affect the investment decision and, especially, the allocation of financial wealth between different existing financial assets. The discussion of the theoretical reasoning behind, and institutional background of, these assumptions has permitted us to unveil the role of banks in a monetary production economy.

We have showed conclusively that it is bank credit, not saving, which plays the crucial role in the financing of investment. This would appear to leave no role for saving, but such is far from being the case. The present chapter develops the supporting role played by saving, and by financial markets in economic growth - a role which has been overlooked even by most Post Keynesian models. For this task, two hypotheses are examined: first, that economic growth is followed by increasing systemic financial fragility; second, that this financial fragility can be mitigated by funding, that is, the issue of long term securities by the investing firms to consolidate their short term liabilities. Once these hypotheses have been discussed, it can be seen that the role of saving and of the financial markets is to provide funding. Our perspective requires that the concept of "capital market efficiency" be replaced with the new concept of "capital market functionality". As said in chapter 1, this concept is only applicable to the neoclassical analysis, where the main role of the financial system is to allocate saving between competing investment projects. Instead, the concept of "functionality", which has both microeconomic and macroeconomic

67

foundations, is proposed for comparing and addressing different financial structures in their roles as stabilisers of the financial system of a growing economy.

The chapter is organised as follows. Section III.2 presents a stocks and flows model of finance, investment and saving from a Keynesian perspective. In section III.3 Minsky's financial fragility hypothesis is reviewed in the light of the above-cited model; this review establishes that growth, in monetary production economies, increases financial fragility. In section III.4 the role of funding, saving and financial markets in achieving a financially stable growth is discussed. Section III.5 applies the distinction between finance and funding to the context of an open economy. At this stage, we will be in position to present the concept of "functionality" of a financial system (section III.6). Section III.7 summarises and concludes the chapter.

III.2. The starting point: the finance-investment-saving circuit

III.2.1. Finance and funding: an unsettled question

Keynes's assumption that finance precedes saving has led to much controversy and misunderstanding. This view had already been challenged in a debate which involved Keynes, Ohlin, Robertson and Hicks.[47] In that debate, Ohlin and Robertson insisted in reinterpreting Keynes's liquidity preference theory within a neoclassical loanable funds framework. Ohlin (1937a,b) claimed that Keynes's ex-post equality between saving and investment was merely a truism that said nothing about the mechanism by which investment was financed. In contrast, Ohlin maintained that deposits precede loans, and hence saving precedes investment. Robertson (e.g. 1937a) shared Ohlin's view, and claimed furthermore that in the case of a rise in investment, the existing volume of saving would not suffice to finance the latter: an increase in the money supply would have to fill the "gap", and that would imply forced saving. If inflation is to be avoided, concluded Robertson, the deposit rates would have to rise in order to stimulate saving.

The controversy was never properly settled; modern Post Keynesians reopened

---

[47] See Keynes, 1936; 1937a,b; 1938; 1939; Robertson, 1937a,b; Ohlin, 1937a,b; and Hicks, 1937b.

it, in a now well-known debate started by Asimakopulos (1983) and followed by replies from, among others, Kregel (1984-5; 1986), Davidson (1986), Richardson (1986) and Terzi (1986). To clarify the matter, Keynes's view can be approached through a stocks and flows model, similar to the one used by Godley and Cripps (1985) for other purposes. This model - the finance-investment-saving (FIS) circuit - substitutes the neoclassical, static view of the process of investment finance. In contrast to this view, the FIS circuit integrates finance into the multiplier to show how saving is created as a by-product of the process of income creation. For this reason it has been used by many Post Keynesians to prove the precedence of investment over saving (e.g. Chick, 1983; Terzi, 1986; Amadeo and Franco, 1988; Carvalho, 1992; Richardson, 1986). But the FIS circuit has more to offer as an analytical tool: based on this circuit it is possible to develop a systemic view of the role of banks, saving and financial markets in the process of growth. This is the heart of the approach proposed in this chapter.

A model of investment finance based on the FIS circuit

Table III.1 consolidates the balance-sheets of the principal agents - namely the banking system, the entrepreneurs and households - in a Keynesian fashion. Each column corresponds to a period (n) of the multiplier process, and is divided into two other columns, displaying the assets and liabilities of those agents; n=0 is the initial position, followed by 3 rounds of the sequential process; n=N gives the end-of-process values. All values in these balance-sheets are nominal, but prices are assumed to be unchanging. Finally, firms' inventories and households' stocks of durable consumption goods are not considered here. Financial assets are cash, deposits in commercial banks and securities.

For simplicity, the following assumptions are made:

(1) only households save;

(2) uncertainty has no effect on anyone's current asset-holding behaviour: balances are either held for transactions or for (long-term) saving purposes;[48] this is similar

---

[48] Uncertainty in portfolio choice decisions, which represents a crucial aspect of Keynes's theory, will be addressed later.

to assuming that "the marginal propensity to buy placements out of household savings" (m) is equal to 1 (see Davidson, 1978: 272);

(3) the propensity to consume is 0.7 and intended savings are held completely in the form of long term securities, which are issued by indebted firms in order to repay outstanding debts; and

(4) there is a lag between the accumulation of active balances (for consumption purposes) and their expenditures, and between the issue of securities and the repayment of debt.

The model considers a simple income multiplier where investment generates a flow of income, consumption and saving. Suppose that an investment of £50 is entirely financed by bank loans, created as a book-keeping operation as described by Keynes (e.g. 1973: 209). This additional supply of bank-money will generate a sequential process of payments - wages and consumption - and, consequently, of transfers of deposits among agents. If we call "intended saving" the additional holding of securities generated alongside the multiplier process, then each period 0.3 of the previous additional income will be used to buy securities and, hence, to repay outstanding debt.

Table III.1 - The financial side of the multiplier story: a numerical example

Period (n)		0		1		2		3		...	N	
Account		A	L	A	L	A	L	A	L	...	A	L
BANKS												
Reserves	(1)	100.0		100.0		100.0		100.0		...	100.0	
Loans	(2)	50.0		100.0		85.0		74.5		...	50.0	
Deposits	(3)		150.0		200.0		185.0		174.5	...		150.0
FIRMS												
Deposits	(4)	100.0		115.0		110.5		107.4		...	100.0	
Capital	(5)	50.0		100.0		100.0		100.0		...	100.0	
Loans	(6)		50.0		100.0		85.0		74.5	...		50.0
Securities	(7)		0.0		15.0		25.5		32.9	...		50.0
Net Worth	(8)		100.0		100.0		100.0		100.0	...		100.0
HOUSEHOLDS												
Deposits	(9)	50.0		85.0		74.5		67.2		...	50.0	
Securities	(10)	0.0		15.0		25.5		32.9		...	50.0	
Wealth	(11)		50.0		100.0		100.0		100.0	...		100.0
Total	(12)	350.0	350.0	515.0	515.0	495.5	495.5	481.9	481.9	...	450.0	450.0
$Y^{(*)}$	(13)			50.0		85.0		109.5		...	166.7	
$S_d^{(*)}$	(14)			15.0		25.5		32.9		...	50.0	
R/L=(1)/(2)	(15)	2.00		1.00		1.17		1.35			2.00	
L/NW=(6)/(8)	(16)	0.50		1.00		0.85		0.74			0.50	

Y = Income; S^d = Intended Saving; (*) Accumulated Values; R/L = bank reserves over bank loans; L/NW = loans over net worth.

As Table III.1 shows, if the reserves available to the banking system are unchanged, banks must reduce their liquidity in order to finance investment.[49] It must be stressed though, that, since deposits remain within the banking system, investment finance need not represent a drain of cash from the banking system.

In the process of financing investment, the corporate sector must also increase their "financial vulnerability" - here defined by the ratio between their loans and their net worth (L/NW). The macroeconomic reason for this result is that until the multiplier is complete, part of the additional savings are not "intended", but result from acceptance of deposits in the course of transactions.

Because at each period the whole of the additional intended saving is used to buy long term securities, at the end of the process aggregate intended saving will be asymptotically equal to investment $(S^d \approx I = £50)$.[50] And since firms use those funds to repay their short term debts, when the multiplier process following a "one-shot" investment is completed, bank loans will be reduced to their initial position (£50).

III.2.2. "Banks hold a key position in the transition from a lower to a higher scale of activity"[51]

The above model assumes that bank loans are a causal variable in determining the level of investment. An applied economist may rightly challenge this assumption, since corporate finance statistics show a higher proportion of self-finance (retained profits) as a source of investment financing in most developed economies (e.g. Mayer, 1988). So why not assume that finance comes totally from retained profits or other sorts of previous saving?

The logic which underlies Keynes's claim that finance comes from banks rather than saving rests upon a view of finance as a sequential process similar to the

---

[49] Banks' liquidity can be measured by the difference between the turn-over of their assets in relation to the turn-over of their liabilities. However, assuming that all deposits are demand deposits, the deposit/reserve ratio (row 15 of Table III.1) may be used as a measure of banks' liquidity.

[50] This should not be confused with the identity between saving and investment. At any point aggregate saving will correspond to the non-consumed income, which is held either in a definite form (securities) or in the form of additional transactions balances (deposits). On this see Chick (1984).

[51] Keynes (1979: 222).

one employed in the above model. If this view is taken to its logical limits, then only in a stationary state, and then only under the strict assumptions concerning the portfolio-choice of savers, can "previous saving" finance investment. This can be demonstrated by using Robertson's (1937a: 171-5) suggestion about the role of saving in financing investment when investment is steady throughout time.

Robertson pointed out that, where investment is made at an equal and steady pace for a certain period of time, the sum of the additional "intended saving" equals the demand for investment finance at any point. In Robertson's words:

> If the act [of investment] is repeated a sufficient number of times, we can regard the sum of the increments of saving being done in any one period of time as balancing the investment done in that period; and if, with Mr. Kahn, we are prepared to forget about the period of transition, we can declare that the problem of the finance of the process of investment to be self-solving (1937a: 172).

This view is illustrated by Table III.2 below, where c stands for the propensity to consume; the rows represent the multiplier processes initiated by an investment (I) equal to £1, undertaken in each period; and the columns, the "intended saving" (S^d) created as a product of the multiplier process.

Table III.2 - A Robertsonian view of overlapping multiplier processes

Period	1	2	3	4	...	N	N+1	S^d
1	(1-c)	c.(1-c)	c^2.(1-c)	c^3.(1-c)	...	c^N.(1-c)		≈ 1
2		(1-c)	c.(1-c)	c^2.(1-c)	...	c^{N-1}.(1-c)	c^N.(1-c)	≈ 1
3			(1-c)	c.(1-c)	...	c^{N-2}.(1-c)	c^{N-1}.(1-c)	<1
4				(1-c)	...	c^{N-3}.(1-c)	c^{N-2}.(1-c)	<1
...	...	...	...	...	...	...	...	...
N					...	(1-c)	c(1-c)	<1
N+1					...		(1-c)	<1
S^d	<1	<1	<1	<1	...	≈ 1	≈ 1	

Notice that from $n=N$ the aggregate demand for securities (S^d) equals the demand for investment finance (I). Thus, in a stationary state (from $n=N$ onwards in Table III.2), no additional creation of liquidity is necessary in order to finance

accumulation: the investing firms may always finance their investment projects through the issue of securities. This result was accepted in Keynes's response to Robertson, that is, his view of credit as a "revolving fund":

> Credit, in the sense of 'finance', looks after a flow of investment. It is a revolving fund which can be used over and over again. It does not absorb or exhaust any resources. The same finance can tackle one investment after another (1937a: 209).

However, as Keynes (1939: 209) rightly pointed out, the existence of a "revolving fund" of credit does not reduce, but consubstantiates, the causal importance of bank credit for the process of growth. Assume now that the economy is growing and that this growth (g) is investment-led:

$$I_t = (1+g) \cdot I_{t-1}$$

Since the increase of investment only affects the additional income created immediately after it, then

$$I_t - m.S^d_t = g \cdot I_{t-1} > 0$$

Therefore, only in the stationary state (g=0) can investment be totally financed by "prior saving", and then only if savers agree to hold all their intended saving in the form of long term securities ($m=1$). Yet any increase of investment above previous investment levels will generate a demand for liquidity that is not automatically provided. In Keynes's words:

> If investment is proceeding at a steady rate, the finance (or commitments to finance) required can be supplied from a revolving fund of more or less constant amount, one entrepreneur having his 'finance' replenished for the purpose of a projected investment as another exhausts his on paying for his completed investment. But if decisions to invest are (e.g) increasing, the extra finance will constitute an additional demand for money (1939a: 209).

Assume that banks do not accommodate an increase of the demand for finance. If the public's liquidity preference is unchanged, then either the rise of investment will be halted by the lack of funds, or investors will bid for funds in the money

market,[52] which may cause an increase in the interest rate.[53] Since the interest rate is a main determinant of the level of investment, this rise may abort the process of growth.

To sum up, it is banks, and not savers, who hold a key position in the process of growth. Only if they share the optimism of entrepreneurs in periods of growth or are led, for any other reason, to accommodate the demand for investment finance, can the monetary production economy grow.

III.3. Growth and financial fragility

Minsky's (1982; 1986) financial fragility hypothesis describes the inherent tendency of investors and speculators to rapidly increase their level of indebtedness in moments of optimism. If such optimism is shared by lending institutions, they will accommodate the demand for loans by reducing their margins of safety. The net result is an increase in the vulnerability of the network of financial commitments of the monetary economy. In turn, the viability of such network depends upon the ability of the borrowing units to honour their debts (Minsky, 1982: 204).

The FIS model presented above corroborates Minsky's hypothesis: a growing market economy is inherently more fragile. First, borrowing from banks to finance investment increases short-term indebtedness. Firms' capacity to repay with their own cash-flows have to wait until their investment projects mature and their productive

---

[52] The other possibility is to borrow from the international banking system, even though this demand for finance may not be directly related to the acquisition of a capital good from abroad. In this case, the additional supply of finance will come from the central banks' conversion of the loans into national currency, which is exactly as if the monetary authority had decided to accommodate the additional demand for money by expanding the monetary base. This possibility will be analysed below in more detail (section III.4.2).

[53] As Keynes pointed out: "The rate of prior saving only tells us how much of the current investment can find a permanent home beforehand without upsetting the liquidity position and the long-term rate of interest, and without time lag. Subject to these conditions, the *increment* of current investment over prior investment (or saving) can only be cared for *permanently* out of the increment of *current* saving; and the period during which current savings are kept liquid by their owners must be bridged by an increase in the revolving fund of 'finance', i.e., of liquid funds provided by the banking system or by dehoarding. It is the rôle of the credit system to provide the liquid funds which are required first of all by the entrepreneur during the period before his actual expenditure, and then by the recipients of this expenditure during the period before they have decided how to employ it" (Keynes, 1939: 284-5; my emphasis).

75

capacity expands. Therefore a bank-financed expansion leaves the corporate sector in more vulnerable financial position. Second, in increasing the supply of investment finance banks are reducing further their "margin of safety". In other words, both firms and banks are augmenting the vulnerability of their businesses and, potentially, their dependence on alternative sources of liquidity.

Below, Minsky's hypothesis of financial fragility is briefly reviewed. This will permit us to establish the risks that a process of increasing fragility can impose to growth. Once this has been done, the micro and macroeconomic roles of saving and financial markets in supporting growth can be fully unveiled.

III.3.1. Minsky's hypothesis of financial fragility briefly revisited[54]

Assume that a firm or a household acquires a debt (D) which generates cash commitments of CC each period i.

$$CC_i = f(D,r) \qquad (1.1)$$

where r stands for the loan rate of interest. These commitments will be met either from quasi-rents (Q), from additional debt or from both. In an uncertain world, the effective quasi-rents (Q^a) will almost certainly diverge from the expected, so that the following equations can be written:

$$CC_i = \phi . Q_i \qquad (1.2)$$
$$Q_i = (1-\sigma).Q_i^a$$

where σ represents the expected variation of the effective quasi-rent (Q^a), obtained by a subjective probability distribution; and ϕ is the percent of the quasi-rents that the borrower expects to use to settle cash payment commitments on the debt D in period

---

[54] There are many formal interpretations of Minsky's financial fragility hypothesis. See e.g. Taylor and O'Connell (1985) and Lavoie (1986-87). Here a simple model, based on Minsky (1982) and Gatti and Galegatti (1990), is used.

i.

Following Minsky (1982: 335), it is assumed that both CC and Q are capitalised at the same rate - an assumption which is expressed by the capitalisation function V. Then the market value of the debt, D, and of the capital goods, P_k, can be expressed by:

$$D = V(CC)$$
$$P_k = V(Q)$$
$$P_k = \mu.D \qquad (1.4)$$

The ratio between P_k and D, μ, indicates the ratio of fixed to liquid capital funded by bank loans. Because of the uncertainties related to the future quasi-rents and to future credit conditions, the borrower will normally hold balances, in the form of liquid assets, above those required for current expenditure. This precaution is especially important for indebted firms, since any extraordinary expense may affect the firms capacity to honour its financial commitment or to finance its productive operations or both. Therefore, assuming that these balances are a function of the total debt, the balance-sheet of the borrower can be described as follows:

$$P_k.K + \eta.V(CC) = V(CC) + Eq \qquad (1.5)$$

where $P_k.K$ is the market value of the firm (liquid and fixed) capital; $\eta.V(CC)$ stands for the firm's provisions, in the form of liquid assets, made for emergency purposes (Minsky, 1986: 217); and Eq is the equity position.

Minsky has identified three financial postures in the context of this model: hedge, speculative and Ponzi financing:

(1) a borrower is hedge financing if he expects that the Q_i will be more than enough to cover the CC_i from $t=0$ to $t=m$.

Assume that a firm departs from a comfortable cash-flow position (that is $Q_i^a > CC_i$ for every i) and then borrows D (in time $t=0$) to finance an investment project. Furthermore assume that the entrepreneur expects quasi-rents only to increase when the new investment becomes productive ($t=m$). Depending on the level of risk

77

the firm now enters into speculative of Ponzi financing:

(2) speculative financing occurs when the entrepreneur anticipates that (i) in the period $t=0$ and $t=m$ his quasi-rents will not suffice to pay all his financial flow commitments ($Q_i < CC_i$) in early periods; but also that (ii) after $t=m$, $Q_i > > CC_i$ so that by a period n the whole debt will be repaid. This implies that CC increases in the period between $t=0$ and $t=m$ because the firm has to increase the volume of debt in order to honour the service commitments of the debt. Speculative financing is only feasible because both lender and borrower share the view that the capitalised value of the operating profits of the firm is higher than its current debt ($P_k > D$, or $\mu > 1$). Nevertheless, the firm maintains precautionary liquid assets against the effect of an unexpected fall in quasi-rents on the planned repayments of debt (that is, $1 > \eta > 0$).

(3) "Ponzi" financing is simply an extreme case of speculative financing. The firm expects to honour its financial commitments with funds raised totally by either additional debt or decreasing liquid asset balances. For instance, in speculative financing it may be the case that the firm pays only the interest charges in the periods $t=0$ to $t=m$, leaving the amortisation of the principal to be paid in subsequent periods. In the "Ponzi" case, the firm's expected quasi-rents are not enough to pay even the interest component of the debt. Then either the firm's liquid assets are rapidly depleted or, if it holds no liquid assets in the beginning of the period (that is, $\eta \approx 0$), we conclude that its lenders are subject to moral hazard.

The three financial postures can be summarised as follows:

Table III.3 - Typical financial positions of Hedge, Speculative and Ponzi Units

	ϕ	μ	η
Hedge	<1	>1	≥ 1
Speculative	>1	<1	$0<,<1$
Ponzi	<1	$<1?$	≈ 0

Notice that so far, the financial postures have been defined in terms of entrepreneurial and banks' expectations. However, a financial position can change because of an unanticipated decline in the quasi-rents, or of a rise in the rate of interest. A change in Q may affect hedge, speculative and "Ponzi" firms alike: hedge units may be forced into a speculative posture, speculative financing may become

"Ponzi", whereas "Ponzi" businesses may simply go bankrupt for lack of refinancing of their debts. As regards a change in the rate of interest, this will only affect those firms with speculative and "Ponzi" financial postures, because only those have to renegotiate the terms of their debts at each repayment period.

A change in the financial positions may also affect the general conditions of credit and the prices in organised financial markets. As regards the lending conditions, if this change is perceived by banks as a sign of increase of lender's risk, then credit rationing may occur. In terms of the model of the banking firm presented in the previous chapter (II.5.2) this will result in an increase of the desired liquid asset ratio (σ) because banks now have to make more provisions for bad debts.

In what concerns the financial markets, a deterioration of the financial postures will have two effects. On the one hand, wealth-owners will revise the capitalised values of the listed firms. On the other hand, those firms under speculative and Ponzi financial postures will be willing to deplete their stocks of marketable assets to honour their debt financial commitments. This increase of liquidity preferences by both wealth-owners and firms is likely to bring down securities prices, which causes the financial situation of the speculative and Ponzi players to further deteriorate.

III.3.2. Financial instability can deter growth

Financial fragility in itself is not a constraint to growth, but it may disrupt the process of expansion. This is especially true if an increase of fragility causes the debt-deflation, an expression of the exhaustion of financial arrangements which may lead to financial instability (Minsky, 1982; Fisher, 1933). Debt-deflation can be triggered by units attempting to sell their liquid assets in order to raise cash (indebted firms), to reestablish their liquidity positions (banking and other financial institutions), or to satisfy some bearish change of expectations (speculators). This run to regain liquidity affects real expenditures through its effects on interest rates, on the availability of funds to finance and fund investment and on long-term entrepreneurial expectations.

To sum up, the fact that banks can finance investment through book-keeping creation of money does not warrant a financially stable process of growth. Growth increases financial fragility, and financial instability, as Minsky (1982; 1986) pointed

out, can halt growth. Having said this, we are now in position to assess the role of saving and financial markets in the process of growth.

III.4. Funding, financial markets and the rate of interest

III.4.1. The microeconomic and macroeconomic roles of saving and financial markets

Even if, in Post Keynesian theory, individual savings and financial intermediation are secondary in the determination of the aggregate supply of investment finance, they do matter in a different context - the question of funding.

From the microeconomic perspective, entrepreneurs and bankers desire to fund their long term commitments on a stable basis because of the uncertainty about the prospective conditions of credit and levels of interest rates. Thus, the reason for funding can be interpreted as a response to a menacing increase in both borrower's and lender's risks (Keynes, 1936: 144). Hence, investment finance in a world of uncertainty is characteristically a twofold process of finance and funding:

> The entrepreneur when he decides to invest has to be satisfied on two points: firstly, that he can obtain sufficient short-term finance during the period of producing the investment; and secondly, that he can eventually fund his short-term obligations by a long term issue on satisfactory conditions. Occasionally he may be in a position to use his own resources or to make his long-term issue at once; but this makes no difference to the amount of 'finance' which has to be found by the market as a whole, but only to the channel through which it reaches the entrepreneur and to the probability that some part of it may be found by the release of cash on the part of himself or the rest of the public. Thus it is convenient to regard the twofold process as the characteristic one" (Keynes 1973: 166).

Being the *loci* where funding takes place, financial markets have an important role in supporting growth. From a microeconomic perspective, they may increase the predisposition of firms and banks to engage in the financing of long-lived assets. Another interrelated microeconomic function is the provision of information for firms issuing securities, underwriters and demanders of securities. This informational role can be summarised as follows: (1) secondary markets signal the price of new issues

of securities; (2) secondary markets make underwriting by specialised financial institutions a less risky business;[55] and (3) secondary markets enable investors to evaluate the prospective profitability of newly-issued securities by enhancing the flow of information (Bain, 1981: 61).

From a macroeconomic viewpoint, it is important to stress that funding and, therefore, financial markets also bear a role which is seldom spelled out. That is, the role of mitigating the increasing financial fragility inherent in a growing monetary economy. This macroeconomic role will very much depend upon two interrelated characteristics of the financial markets: (1) their size; and (2) their stability. A thin financial market is unlike to be able to increase its levels of operation without significant shifts of asset prices; and a volatile financial market can provoke sudden shifts of the rate of interest and, therefore, be more damaging than supportive of the process of growth.

Finally, it is worth remembering that not only thin markets are highly speculative and volatile, neither is speculation a short-term phenomenon which tends to disappear in the long run. Much to the contrary, the very existence of the secondary markets (where old securities are sold and bought) relies on continuous trading, which provides the liquidity that makes it less risky for wealth-owners to hold long-term securities (Keynes, 1936; Chick, 1990). It is this provision of liquidity which makes long term bonds and securities attractive to savers - who, as Davidson (1982: 29) has rightly put it, are searching for safe "liquidity time-machines", and rarely wish to be 'blocked in' to holding an asset for a long period of time.

To sum up, financial markets have an important, but yet ambiguous, role in supporting growth. They intermediate between the demanders of securities and those firms wishing to fund their short-term liabilities. But one cannot forget the negative side, that is, the instability brought by the speculative nature of these markets.

---

[55] The underwriter bears the responsibility for the acquisition of the securities which are not absorbed by the market after the price offered reaches a pre-established minimum. So the institution must be prepared to take up shares if called upon to do so, and therefore it must have access to cash when this occurs. This access can be provided by credit lines with banks, but it may also be necessary to sell some of its assets. Since its assets are likely to be primarily securities, then secondary markets are obviously useful to provide the underwriter with cash when it is required.

III.4.2. The role of the "middleman" in funding

One of the assumptions of the FIS model presented above was that all "intended savings" were held in the form of long-term securities. This is not only unrealistic, but also reduces the importance of the financial intermediaries (or "middlemen") in the process of funding accumulation.

As highlighted up above, what makes the financial markets functional actors in reducing the financial fragility inherent in growth is its ability to transform short term assets which are demanded by savers as forms of "liquidity time-machines" into long term sources of funding. This maturity transformation assumes different forms according to the institutional background behind the financial structure. For instance, as Davidson (1986) illustrates, in the segmented financial markets which existed in the US before the deregulation of the 1980s, the commercial banks provided sight and short-term deposits against short-term commercial and industrial loans; investment banks were specialised in converting short-term borrowing into long-term borrowing through underwriting operations; and institutional investors (e.g. insurance companies and pension funds) would invest savings on behalf of the general public. The finance-funding mechanism of this specific institutional structure is illustrated by Figure II.3 below.

To sum up, the existence of financial intermediaries broadens the system's ability to transform maturities. Therefore, financial intermediaries also have an important role in supporting a financially stable process of growth and development.

Figure III.1 - A schematic view of the finance-funding mechanisms in the US pre-1980

FINANCE

BANKS

FIRMS

INVESTMENT

REPAYMENT

FIRMS

CAPITAL–GOODS SECTOR

INVESTMENT BANKS

INCOME

(UNDERWRITING)

FUNDING

FINANCIAL MARKETS

HOUSEHOLDS

SAVING

LONG TERM FUNDS

INSTITUTIONAL INVESTORS

CONSUMPTION
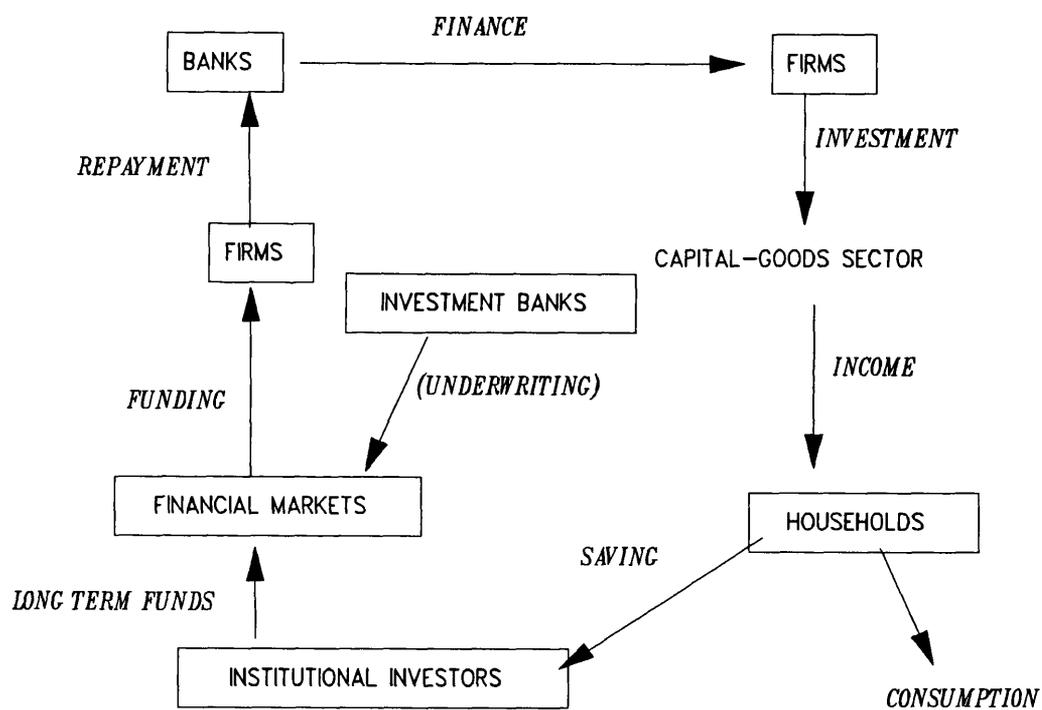
III.5. Funding in open-economy macroeconomics: a note

It has been indicated in the previous chapter that the distinction between finance and saving must also be applied to the analysis of the role of external debt in financing development - especially in these times, when multinational credit-creating institutions are a part of the world scenario. Another important distinction is, of course, that between finance and funding.

This distinction can be straightforwardly used in the analysis of the LDCs' debt problem. One of the main problems about the recent experience with LDCs' debt was that, even though the international banking system substantially increased their capacity to *finance* firms in developing countries, the institutional mechanisms to *fund* them were not available in the 1970s/1980s (any more than they are nowadays). The reasons for this are many, but one of them is that few companies in LDCs are large enough or well enough known internationally to be able to float stocks and long-term securities in the international organised financial markets.

This lack of mechanisms to fund LDCs' firms may partly explain why in the 1970s, when there was a significant increase of international bank loans to LDCs, banks preferred to lend with floating interest rates (or at short maturities) and the guarantee of LDCs' national governments was commonly required for such operations. The short term maturities of the rapidly increasing loans to LDCs almost immediately put LDCs and the international banking system into a more fragile position. For even if such a debt had been used to finance expansions of the productive capacity to export (which, incidentally, was not always the case), LDCs could not repay their debt before such capacity was put to use. Indeed it only took a rise of interest rates, caused by the monetary policies of the developed countries in the end of the 1970s, to turn the financial fragility of the LDCs' position into the Debt Crisis of the 1980s.

III.6. Micro-efficiency versus macro-efficiency of the financial system: the concept of functionality

The measure of efficiency of the financial system in contemporary financial theory is based upon the "competitive capital market paradigm". From a neoclassical perspective, in a competitive capital market saving/capital is allocated optimally;[56] hence inefficiency is related to anything outside that paradigm: real-life institutional arrangements are implicitly seen as "distortions" in relation to the optimal outcome of the idealized structure. The role of analysis is thus to point to the imperfections of such structures and, perhaps, to the ways of reestablishing the sovereignty of the market forces (e.g. financial liberalisation).

From a Post Keynesian perspective, financial systems are more than intermediaries between saving and investment: they create saving (through finance) as much as they allocate of saving (funding). Both roles are equally important in an entrepreneur economy: finance creates the means of commanding resources that will permit entrepreneurs to implement their production and investment decisions; funding represents an incentive for both banks and wealth-holders to hold securities and, additionally, reduces the financial fragility inherent to growing monetary economies. Since neither the availability of finance nor the existence of mechanisms for funding can be warranted by the simple forces of free competition, the meaning of efficiency here must forcibly have a different connotation in our analysis. In order to stress this difference, we will use another term: functionality.

Functionality is defined as follows: a financial system is functional to the process of economic development when it maximizes the use of existing resources in the process of economic development with the minimum possible increase in financial fragility and other imbalances that may halt the process of growth for purely financial reasons. Functionality has two distinctive dimensions: one concerns the stability of fragility of the financial system and another is related to the allocation of real resources. This first is the macroeconomic dimension, the second, the microeconomic.

---

[56] On this see chapter I above.

In the macroeconomic dimension, the functionality of the financial structure should be judged by how well it performs the functions of financing and funding; in other words, how it supports financially stable growth. As regards the microeconomic dimension, functionality relates not to the static allocation of existing resources, but to the *dynamic* allocation of resources: since the under-employment of potential resources is characteristic of developing market economies, investment will not only increase the use of existing (and possibly idle) available productive resources, but will also create them.

III.7. Conclusion

The fact that finance is independent of previous saving does not guarantee that growth can be sustainable from a financial perspective. Economic growth is normally accompanied by increasing financial vulnerability of firms, banks and other financial institutions; hence, growth increases the economy's financial fragility. This in itself does not threaten the process of growth, but it can be disruptive if it deteriorates into financial instability and debt-deflation.

Financial fragility can be mitigated by funding, that is, the issue of long-term securities by the investing firms to consolidate their short-term liabilities. Consequently, saving and financial markets may play a fundamental role in a financially stable process of growth/development. This role is however ambiguous, because of the inherent volatility of those markets.

Having defined the role of banks, saving and financial markets in the process of growth, the analysis from now on can centre on the concept of functionality. A financial system is deemed functional if:

(1) it has credit-creating capacity and this capacity is used to accommodate the additional demand for credit related to the "investment-finance motive" and to additional transactions demand;

(2) it has funding capacity in order to reduce the increasing borrower's and lender's risks; and to reduce the risk of financial fragility, which is inherent in the process of growth.

(3) can maintain robustness throughout the process of growth, ensuring that the increasing financial fragility does not degenerate into financial instability.

(4) can avoid over-borrowing in foreign currency, reducing to the minimally required the financial vulnerability of the economy to changes in credit conditions abroad.

There are several ways that such functionality can be achieved. The institutions implicit in Keynes's finance-funding process is the English system of the 1930s: developed banking system and organised financial markets. However, history shows that many other forms of organising the financial system can enhance the functionality of systems which do not have developed funding mechanisms. For that, compensating structures, or a consistent financial policy or, preferably, both must

exist. The next chapter uses the concept of functionality to compare different national financial structures and to address the relation between financial and economic development.

IV. FINANCIAL STRUCTURES, FINANCIAL DEVELOPMENT AND ECONOMIC DEVELOPMENT

IV.1. Introduction

It has been pointed out earlier in this thesis that less developed countries commonly have thin or even no organised financial markets (see e.g. Goldsmith, 1969; McKinnon, 1973; World Bank, 1989). According to the mainstream view, this "institutional under-development" is the result of the "long history of financial repression in developing countries" (Fry, 1989: 233). It is further assumed that financial development can be promoted by financial liberalisation, which is alleged to increase saving and therefore investment.

An alternative view on financial structures, which is consistent with the theory presented in the previous chapters, financial development and economic development is presented in this chapter. Rather than assuming that there is an "optimal" financial structure, different financial structures are compared according to their potential functionality. As regards financial development, it is indicated that, in countries where funding channels did not develop, compensating structures must be built up, in order that growth may be financially sustainable. Finally, it is also stressed that financial development is crucial to the process of development, and must be part of a long term strategy for economic development.

This chapter is divided into five sections. Section IV.2 compares the main features of two different financial systems, the capital-market based systems and the credit-based systems, establishing their relative strengths and shortcomings in supporting financially stable growth. Next, section IV.3. investigates the reasons why rapid developing economies tend to have credit-based systems and examines the compensating structures created in some successful developing countries in order to overcome the imperfections of their financial structures. Section IV.4 indicates why the establishment of an appropriate financial structure should be an pivotal part of

development policies. Section IV.5 summarises the finding and presents the conclusions.

IV.2. Capital market-based and credit-based financial systems

Institutional environments are, by nature, constantly changing and, notwithstanding deterministic faith, nothing can guarantee that development will lead to a unique financial structure. For instance, one of the characteristic developments in the early years of industrialisation in Britain, where the Industrial Revolution began, was the rapid evolution of the banking system, which enhanced investment and speeded up economic growth.[57] However the development of capital markets has not been so uniform - a phenomenon confirmed by Zysman's (1983) classification of financial systems as capital market-based and credit-based systems.

The capital market-based system is one where securities (stocks and bonds) are the main source of long term funding. There is a wide range of capital and money-market instruments, a large number of specialised financial institutions offer competing services, and prices are determined by the interplay of supply and demand. In credit-based financial systems, on the contrary, the capital market is weak and firms depend heavily on credit for raising finance beyond retained earnings.

In a nutshell, what differentiates the two types of financial structure is the existence or not of funding mechanisms. This difference has, in turn, consequences as regards the ways which investment can be supported by the existing financial institutions. From the theoretical perspective adopted thus far, the lack of organised financial markets can have two destabilising consequences for development: first, finance will tend to be very short-term and credit rationing may occur in times of growth; second, if finance is forthcoming to sustain growth, the financial position of both firms and banks will become more fragile (how rapidly depends on the rate of growth). Let us investigate these two consequences.

As regards finance, the supply and the average maturity of loans made available for investment will be determined by the banks' liquidity preference. If

---

[57] See Gerschenkron (1962), Cameron et al (1967) and Kennedy (1987).

financial markets remain underdeveloped and funding is not available, banks' liquidity preference will be high and they may refrain from expanding their lending activity. And even if they do lend, banks will almost certainly prefer short-term loans (say towards the financing of consumption and/or speculation) to longer-term, and hence, riskier, investment projects. As Zysman points out, this is directly linked to the risks of long-term lending:

> Any loan is a gamble on the future solvency of the client, but a long-term loan involves a new kind of risk. Obviously, a long-term loan on the business of a client cannot in reality be secured by any physical assets. Moreover, a bank gets the bulk of the money it uses from funds deposited for a short term at the going interest rate. If it lends a firm money for five years, during the period, the depositors may withdraw their funds at which point the bank's reserves drop and it must reduce its loans: in an extreme case it might not be able to pay claims presented to it. Another, potentially more serious, problem may occur should interest rates change in unexpected ways. If the short-term rates go down and the bank has lent long, its margin of profits increases, but if the rates go up, its profit margins are cut or it loses money (1983: 63).

In what concerns the financial fragility of the economy, if banks are still prepared to finance expansion despite the lack of appropriate mechanisms to fund investment, the indebtedness of the corporate sector has to increase. Growth will only be sustained if a section of investing firms borrows short, hoping to repay by borrowing until their investment matures and begins to produce additional cash inflows.

Credit-based systems are thus extremely vulnerable to changes in credit conditions in times of growth. For instance, a change in the rate of interest will represent a significant rise in firms' financial expenditures; if firms try to adjust by cutting other expenditures simultaneously, this may set in motion a vicious circle of financial reactions which could reduce effective demand even further.

IV.3. **Different financial structures in a historical perspective**

IV.3.1. **Financial development in the context of development**

In order to illustrate the difficulty of matching financial and economic

development in a rapidly growing economy, let us assume an economy with the following characteristics: fast economic growth and structural change and high levels of accumulation in the form of industrial investment - say, a passage from an agrarian to an industrial urban economy.

In a primarily agricultural economy, the needs for financing are relatively small. For instance, in a non-subsistence plantation, the financing of production involves not much more than the payment of labour. If credit is needed, the producer can always use his own land as collateral for borrowing. Land is the main physical capital and can be expanded by simple incorporation (especially if the agricultural frontiers are still very wide, such as in the case of many LDCs), which may require little financing.

Changes in the productive structure affect financial requirements within the three great productive sectors: the primary, the industrial and the services sectors. Industrialisation changes the financial requirement of the primary sector in at least two ways. First, urbanisation of the economy is normally attached to the process of industrialisation, which in turn expands the demand for agricultural products. Second, the spacial detachment between producers and consumers increases. This in turn stretches the process of intermediation and creates new financial requirements. In addition, the change in techniques of production may require non-conventional inputs and equipment, which again creates new sources of demand for long-term financing.

As regards the industrial sector, the internalisation of the productive process increases the phases of production and introduces new links between primary production and final goods. This implies an expansion in the financial requirements per unit of production. Industrialisation also changes the composition of investment towards sectors with higher capital intensity, larger scales and longer terms of maturation. Finally the process of industrialisation affects the services sector due to the inherent process of urbanisation, which extends the needs of the infrastructure, and the expansion of the commercial sector.

To sum up, in addition to the financial requirements inherent in the process of growth, the structural changes intrinsic to economic development generate pressure on the financial system. Even though the demand for short term and medium term finance increases, long-term finance is perhaps the most problematic aspect of

financial development for two reasons. First, financial institutions (and especially banks) will, because of the liability structure, prefer short-term assets. Second, financing the accumulation of physical capital requires increasing the vulnerability of financial institutions. Therefore banks will only accept the risk of financing long-term projects if competition drives them to and if they can mitigate their risk through funding. However, in a rapidly growing economy, financial institutions can grow profitably simply by providing short-run finance to credit-thirsty enterprises. In this case, in order to grow, firms will need to have recourse to renewable short-term credit, self-finance or foreign indebtedness in order to implement their investment projects.

IV.3.2. Finance in the early stages of industrialisation

Given the pattern of financial and economic development during England's Industrial Revolution, it is not surprising that Anglo-Saxon economic literature has always elected saving as the main source of finance (see chapter I above), for in this phase of British development, reinvestment of profits was the norm among businessmen and this was achieved mainly by personal thrift. For instance:

> The usual practice among English industrialists, especially in the early days of the Industrial Revolution, was to allow themselves 5 per cent on their invested capital for living expenses. Only the net income in excess of that amount was called profit, and it was usually reinvested in the business (Cameron, 1967: 39).

This view of finance cannot be extended to the analysis of development finance nowadays for three main reasons. Firstly, the pace of growth and change in the early stages of industrialisation was nothing like that which we are used today; secondly, the rate of capital accumulation was hardly spectacular either; and thirdly, the structural changes in the economy were not as dramatic as those in modern industrial development. This can be shown by some facts about the British Industrial Revolution.

In England, the annual rates of yearly growth in the first half of the eighteenth century scarcely averaged more than 0.5%; this rose to about 1.5 % p.a. after 1750 until it fell during the American Revolution; finally, it started rising again by 1785

reaching an average overall rate of some 3 % p.a. in the 1830's.[58] Further, according to Deane (1961), at no time in the 18th century England did the ratio of capital formation to national income rise above 7 or 8 per cent and for most of the century it remained below 5 per cent. In addition, Pollard (1964: 301) notices that the "amount of fixed capital involved in industry, compared with circulating capital, has often been exaggerated".[59] Pollard also shows that direct suppliers' credit was the main source of financing of working capital, so that

> It was ... possible for firms beginning in a small way and with greatly
> inadequate capital resources of their own to insert themselves into the
> circulation of credit and, in this way, to acquire working capital by a
> process of running credit balances of much larger amounts than
> debtors'. Conversely, firms of merchant origins, or otherwise well
> provided with capital, could find themselves, even in the factory age,
> using it to finance other firms' current needs rather than their own
> productive base (op. cit.: 306).

Finally, data compiled by Cameron (1967: 33-5) allows us to show that the structural changes in the economy were not as dramatic as one is used to in modern industrial development:

Table IV.1 - Participation of great productive sectors in national income in England - selected years

Sector/Year	1688	1801	1841
Agriculture, Forestry and Fishing	40%	32.5%	22.1%
Mining, Manufacturing and Building	21%	23.6%	34.4%
Trade and Transport	12%	17.5%	18.4%

Source: Cameron (1967: 33-5).

Comparing these data with recent experiences of development (see Table IV.2 below), changes in the size and structure of the productive basis in the early stages of industrial development were not very rapid.

---

[58] Data from Phyllis Deane's "Capital Formation in Britain before the Railway Age", *Economic and Cultural Change*, IX (April, 1961); quoted in Cameron et al (1967: 17).

[59] In fact Pollard (1964: 301-2) showed a range of numerical examples where the ratio of fixed capital to stocks varied from 8 to 12%.

Table IV.2 - Some indicators of economic development

	GNP growth (1)		Investment/ GNP (2)		Industry/ GNP (3)	
	1965-73	1973-80	1965	1980	1965	1980
Low-income economies	6.5	4.7	19.0	25.5	28	37
Middle-income economies	7.0	4.7	21.8	27.8	34	39
High-income economies	4.8	3.1	16.7	22.1	42	37

Source: World Bank, 1991: pp. 184-185.

Therefore, in the early stages of industrialisation the pace of growth and accumulation allowed the volume and maturity of loans to evolve slowly without causing major disruption to the process of development. Hence it is not surprising that the evolution of the financial structure, besides the banking system, was very slow too. For instance, whereas the London stock market originate between 1689 and 1720, by the early decades of the nineteenth century it had acquired a key position in the British financial system, rivalling in importance that of the Bank of England, until the mid nineteenth century it dealt chiefly in government securities. The insurance companies, conversely, did invest a portion of their assets in industrial projects.

But, until the mechanisms to fund investment were almost not developed, the role of banking was crucial in providing an increased supply of means of payment to meet the rapidly increasing demand for money associated with industrialisation, higher incomes, and the monetisation of the entire economy (see Pollard, 1964: 41). This explains why the proportion of banks' assets in national income grew so fast: in 1775, 1800, 1825 and 1844 the ratios were respectively 15.2%, 27.9%, 29.6% and 34.4% (Cameron, 1967).

To sum up, in the early stages of industrialisation it is evident that the slow pace of change in the financial structure matched well enough the changes in the financial requirements of the time, for

> [I]nsofar as the newer forms of industry had a greater need for capital, both fixed and circulating, than the old, the transition was gradual, not sudden. The size of the average firm increased somewhat over time,

and new firms entering most industries in the 1830's were probably larger than new firms entering the same industries in the 1780's; but for the most part growth was internal - within the firm - by means of reinvested profits. The proportion of working capital varied from industry to industry and may have increased slightly over time. Rarely, however, did the "representative firm" in any industry invest as much as 50 per cent of its total assets in fixed capital. Of greater importance collectively were the liquid funds or access to credit needed for the purchase of raw materials, the payment of wages (and in some cases of rents and royalties), and the extension of credit to buyers. In this respect the difference between the new industrialism and the old was one of degree only, not one of kind (Cameron, 1967: 36).

In contrast, matching financial and economic development in countries with rapid growth and high levels of accumulation is significantly more problematic - especially with regard to the financing of long-term, highly capital-intensive investment projects. And, as we shall show below, this is exactly the case of the so-called late-developing countries.[60]

IV.3.3. Investment finance and financial fragility in rapidly growing economies with underdeveloped funding mechanisms

Long-term finance in capital market-based systems is inherently dependent upon the existence of mechanisms to provide funding. This may partly explain why in countries where funding channels did not develop, compensating structures are normally found, such as a strong commitment on the part of private banks or close government intervention - for example, the creation of development banks and the use of a regulated selective credit mechanism.

The German universal banks provide an example of a compensating structure: it was basically the great banks which geared and sustained the fast pace of industrialisation in the last half of the eighteenth century. Schumpeter (1939: 349) describes that role undertaken by the German great banks as follows:

[the banks] took care of the necessary issues of stocks and bonds, thus helping the enterprises to redeem its short debt and providing it with

---

[60] See Table IV.2 above for the pace of growth and accumulation in the recent experiences of development.

additional means. In order to effect this they were ready to take these stocks or bonds for their own accounts, not only if they were unable to place them, but in the ordinary course of their business routine ... When they placed the securities acquired, they again financed the private investors so that, temporarily at least, the transaction often meant no more than a shift in assets.

This was especially true after the 1870s, this feature was already clear before then (see Tilly in Cameron et al, 1967). Another interesting characteristic was the "entrepreneurial element" of the association between business and the banking system:

> In some instances the bankers initially perceived new opportunities for investment and suggested methods of exploiting them. More important, however, were entrepreneurial tasks that were allied with financial ends. Frequently, interested bankers obtained government approval and support for the projects of others. Then they had to create a market for the new securities. Finally, it was essential for them to ensure that the policies, financial and otherwise, of enterprises newly created or enlarged would continue to favor, or at least not interfere with, their own banking interests (Tilly, op.cit.: 178-9).

But Germany was not the only case where the financial structure had a wider role in the process of accumulation. For example, between 1868 and World War II, Japan industrialised vigorously and developed a sophisticated, modern financial system, well structured to meet the needs of economic development. This was not coincidental but a planned policy of the government, which clearly favoured the evolution of the system as a tool for promoting economic growth.

In Japan, although the initial capital for industrial investment came primarily from stock subscriptions by industrialists (especially members of the wealthy merchant-landowner-financier group, and in some instances, notably railways, by the aristocracy), it appears that commercial banks financed most individual subscriptions to both new and existing enterprises (idem: 235). Further, banks also appear to have directed funds to specific enterprises. And not only did new enterprises benefit from this sort of financial arrangement:

> Industrial enterprises relied on two main sources of funds: new capital stock issues, sold mainly to existing stockholders; and short-term and long-term loans from banks. It was not clear which was more important in the early years [of the industrialisation process], but by the turn of the century bank loans were clearly the major source (Patrick in Cameron et al, 1967: 283-4).

In fact, many big conglomerates (*zaibatsu*) owned their own banking institutions or at least maintained a very close relation with them. This made it relatively easy to transfer funds among affiliated enterprises and to collect private individual savings to finance *zaibatsu* investment. Generally speaking then, large banks were increasingly important in financing both the initial and the continued development of large-scale enterprise, based on high indebtedness and stable interest rates.[61]

More recently, modern Japan and some of its neighbours, notably Taiwan and the Republic of Korea, appear to have inherited this kind of institutional arrangement, where government, banks and enterprise have strong links (see Foley and Lazonick, 1986 and Wade, 1989). According to Zysman's classification, all these three East Asian countries have credit-based financial systems, with government-administered prices. The tight control of the banking system on credit supply is evident from the fact that, for instance, in Taiwan virtually the entire banking system is government-owned; and in the Republic of Korea, even after the denationalization of banks in 1980-83, the government exerts an important influence through the direct appointment of senior managers and personnel.

To sum up, the institutional mechanisms created to finance and fund investment exemplified above seem to be institutional responses to the difficult problem of financing development when the rate of growth and changes in the productive structure are too rapid. The problem of financing is as important a factor for the process of economic development now as it was in the early stages of the development of Western European countries (Wade, 1989: 137). The only difference seems to be in the circumstances of late development, with the 'demonstration effect' and the availability of high technology, raising both attempted growth rates and capital costs. These exacerbate the need for further institutional arrangements - to promote development by overcoming the relatively slow evolution of long-term financing mechanisms and by supplying the volume of capital required to set up modern industrial plants.

---

[61] Up until now although the banking system is mostly private, it depends strongly on the central bank for access to supplementary deposits. In all these cases government sets interest rates and limits on collateral requirements (Wade, 1989: 133).

IV.3.4. Summing up the argument

As said above, a credit-based financial system requires further compensating structures in order to be functional in the process of development, especially with regard to the financing of long-term projects. In a credit-based financial structure dominated by institutions, if growth is to take place at all, then one of two possibilities must occur. First, banks must maintain a long-term relationship with their clients, consistent with the financing of the latter's long-term positions. Credit-granting is based on he firms' long-term prospects, but financial institutions are pressed into a close monitoring of management and their decisions.

Second, where this spontaneous institutional arrangement does not evolve, it is common to find that the State has had to intervene in order to secure long-term funds. This situation seems to be the origin of Zysman's credit-based financial systems with administered prices: government either creates institutional arrangements to reduce the risk private institutions undertake (e.g. rediscount windows for long-term loans) or they set up their own development agencies. In both cases, the government can exercise a more direct influence on firms' decision-making and the direction of development.

To sum up, different financial structures may be viewed as the institutional means of overcoming the problem of financing growth. It seems, however, that the faster the pace of growth and structural change in the productive sector, the more unlikely it will be that investment finance and funding will develop spontaneously. History shows, for instance, that the German universal banks and strong government intervention in the mechanism of finance were used by late-comers to the now developed countries, to establish their own finance-funding mechanisms. But for many other countries (like Brazil), the recourse to profit-inflation and to foreign indebtedness to finance internal accumulation has played an important role, with great costs in terms of financial and macroeconomic stability.

IV.4. Financial and economic development: a policy-minded approach

Policy towards enhancing the functionality of the financial system for

economic development should focus as much on an appropriate financial policy as on institutional development. As regards financial policy, it must be remembered that in a fast-growing economy, with constant pressure on finance, private financial institutions can profitably grow simply by providing short run finance to credit-thirsty enterprises. Neither private banks nor other financial institutions will have the competitive stimulus to finance long-term positions. In this case, in order to grow firms will have to resort to short-term credit, self-finance or foreign indebtedness in order to implement their investment projects.

It is thus naive to expect that financial liberalisation and positive real rates of interest in themselves will be sufficient to solve the problem of the lack of long-term finance (and it may even prevent the solution of the problem). In fact, our analysis points out that, in credit-based financial system, ceilings on interest rates may be rational mechanisms to avoid financial instability.

With regard to institutional development, this must be a long-term policy. Thin financial markets, which are the rule in LDCs, tend to be highly speculative and manipulated by a few big "insiders". This creates a comprehensive mistrust amongst most small savers and even some potential institutional investors (e.g. pension funds). Therefore, such development must be carried out with careful regulation by the authorities - regulation which can be loosened according to the development of such markets. It is unlikely though that complete deregulation will ever be compatible with financially stable growth.

Finally, it is important to remember that in countries where financial markets did not develop sufficiently to support financially stable growth, compensating structures were created - such as, for example, a strong commitment on the part of private banks (e.g. the German universal banks), the development of financial/corporate conglomerates (e.g. the Japanese financial/corporate conglomerates) or close government intervention such as the creation of development banks and the use of regulated selective credit mechanism (e.g. the South Korean case). It seems that LDCs, and perhaps multilateral development agencies have more to learn from these experiences than from the "capital-market based" paradigm of an efficient financial structure.

IV.5. Conclusion

In order to be functional in the process of growth, a financial system must have credit-creating power, funding mechanisms and maintain robustness throughout the process of growth. As indicated in previous chapters, all of these roles depend upon the current stage of development of the financial structure. This institutional evolution is not independent of the speed of growth and the intensity of structural transformations that economic development implies.

A fast developing economy will tend to develop a credit-based financial system for three reasons. First, growth depends on additional credit, whatever the existing type of financial structure. Second, if growth is high, then even if the marginal propensity to buy placements out of households' savings is high enough, long-term funds will not be available to fund all existing outstanding debt. Third, if development creates constant excess demand for financing short-term operations (working capital, for instance), financial institutions (especially banks) will have no competitive stimuli to finance long term or to promote funding.

Credit-based financial systems cannot support high levels of growth unless other financial arrangements are created. These arrangements exist in order to overcome shortcomings created by the lack of mechanisms to fund investment and the increasing financial fragility inherent in growing economies. In many LDCs the process of growth and structural change is faster than one can expect the financial structure to develop, especially as regards the capacity to fund ongoing investments. This means that, unless other arrangements exist to overcome the gap between financial and economic development, growth will be constantly constrained by the lack of sources for financing or surges of financial instability. Such seems to have been the case of Brazil in its recent experience of rapid industrialisation. This is the topic of our next four chapters.

V. FROM THEORY TO EVIDENCE

V.1. Introduction

This chapter marks the transition between the theoretical and applied parts of the thesis. It summarises the story of Brazil's development from 1947 to 1983, concentrating on the relation between real and financial development, with three aims: (1) to justify concentrating on this period, in particular to justify stopping in 1983; (2) to indicate the questions raised by applying the approach of the first four chapters to this period of Brazilian economic experience; (3) to indicate the method of application.

The chapter is organised as follows: Section V.2 provides an overview of the problems dealt with in the case study and explains the choice of overall period. It also highlights the importance of the financial reforms of 1964-5, which explains the demarcation into two sub-periods, before and after the reform, which is followed in subsequent chapters. Section V.3 shows how the Post Keynesian framework developed earlier will be used to structure the questions to be addressed in subsequent chapters. Section V.4 summarises and concludes the chapter.

V.2. The empirical background: a summary of the period and its sub-periods

In our case-study we compare the functionality of Brazil's financial structure before and after the financial reforms of 1964-5. The study goes from the period of 1947 to 1983, which is divided into the periods of 1947-66 and 1967-83. These sub-periods were chosen for reasons concerning both the economic and the financial developments of the period.

The year 1947 is a watershed in Brazil's economic development after the Second World War, because it was then that the first steps to the rapid process of import-substitution were taken by Brazil's government. This process had already

started spontaneously in the 1930s and 1940s, with the subsequent import constraints caused by the world trade crisis and the Second World War. However, with the raising of import tariffs to counter the increasing balance of payments deficit, 1947 marks the beginning of an increasing involvement of the State in the process of industrialisation which culminated with the *Plano de Metas* (Target Plan) from 1956 to 1960. The Target Plan promoted an unprecedented industrial development, which increased the pace of accumulation and boosted output and employment. This boom finished in 1961, and from 1962 to 1966 the country saw its first industrial recession.

The period between 1967 and 1979 marks another phase of Brazil's import-substituting development. First, growth was resumed by a boom in the consumption of durables and in the housing sector. The exhaustion of the inherited productive capacity in the beginning of the 1970s signalled to the fact that the continuance of Brazil's development required a renewed rise in investment. This time again the government led the process of import-substitution with its Second National Development Plan (1974 Plan), which rapidly raised the accumulation. The growth-*cum*-debt strategy of the 1974 Plan ended in 1979, with the highest levels of external and internal debts ever in Brazil, soaring inflation and menacing financial fragility. The 1980s, therefore, are characterised by subsequent stabilisation plans, resilient inflation, several accords with the IMF, but no true continuance to the process of economic development. To use a well-established *cliché*, the 1980s were in many aspects a lost decade.

The second reason for choosing the period between 1947 and 1983 is the fact that the 1964-5 financial reform changed substantially the way accumulation was financed and the relation between the financial system and productive sectors in general.

Because the causes of the problems behind Brazil's lost decade are completely characterised by the events up to 1983, this year has been chosen to conclude our empirical analysis. In other words, to proceed from then on would extend significantly the scope and size of this thesis, without contributing to our conclusions.

Table V.1. Brazil: macroeconomic indicators from 1947 to 1983

		1947-61	1962-66	1967-73	1974-80	1981-83
GNP	(1)	7.0	5.0	11.2	6.8	-0.8
per capita GNP	(2)	4.2	1.0	8.5	-3.1	5.4
Industry	(3)	8.7	4.9	13.5	7.0	-3.4
Agriculture	(4)	4.1	4.4	4.9	5.4	-0.1
Inflation (WPI)[a]	(5)	15.8	81.9	19.4	49.2	123.0
EXTERNAL SECTOR [b]						
Imports/GNP	(6)	6.5	4.5	6.0	8.5	7.2
Exports/GNP	(7)	7.5	5.4	6.1	6.9	8.4
Debt/GNP	(8)	7.9	15.7	12.8	18.7	27.5
Debt/Exports	(9)	123.6	291.8	208.3	274.2	327.6
INVESTMENT INDICATORS						
Total investment as % of GNP[c]	(10)	15.4	17.4	20.4	23.6	19.5
Total (annual rate of growth, %)[d]	(11)	9.5	6.6	14.5	6.4	11.9
Private investment as % of total investment	(12)	73.4	65.5	57.5	60.7	63.2
Private (annual rate of growth, %)[d]	(13)	6.7	15.0	21.2	6.2	-8.5
Government investment as % of total investment[e]	(14)	26.6	34.5	42.5	39.3	36.8
Government investment (annual rate of growth, %)[d]	(15)	12.0	12.6	14.3	3.5	-16.2

Sources of Raw Data: rows 1-2: IBGE, 1987, p. 111; rows 3-4: 1947-70: Instituto Brasileiro de Economia - Fundação Getúlio Vargas/IBGE (as published in *Anuarios APEC*, 1987, table I-2); 1971-83: IBGE, 1987, p.122; row. 5: IBGE, 1987, p. 111; rows 6-7: idem, pp. 536-537; row. 8-9: idem, p. 543; rows 10-11 : 1934-45: Goldsmith, 1986, p. 152; from 1947 onwards: IBGE, 1987, pp. 114-116 and 126 (see observation below); rows 12-13: from 1947 to 1966: Werneck, 1968, p.99; from 1967 to 1979: Trebat, 1983, p. 130; from 1980 to 1981: Dismoor, 1990: 62; rows 14-15: nominal private investment obtained by subtracting government investment from total investment. **Observations:** [a] rates of change of average general price index (IGP-DI); [b] dollar values transformed into cruzeiro using the implicit exchange rate as in IBGE, 1987, pp. 524-5; [c] total investment includes changes in inventories; [d] from 1947 to 1969 real total investment was obtained by deflating nominal valued by GNP implicit deflator; data for 1970-83 obtained from IBGE, p.126; [e] includes investment of government-owned enterprises.

Until the 1960s the Brazilian financial system was dominated by the banking system, and the latter was in turn dominated by the government's bank, the *Banco do Brasil*. This institution shared the responsibility of financing investment with the Treasury and the National Development Bank (BNDE).[62] In contrast, the private banks concentrated their operations on the short term and maintained high levels of mark-up. Finally the financial markets were underdeveloped and dominated by operations not related to the financing of productive investment (Table V.2).

---

[62] The BNDE was created in 1952 to finance investment made by public enterprises, using public funds and other transfers for this purpose. Only in the 1970s did BNDE begin to finance national private companies as well.

Table V.2. Brazil: some indicators of the development of the financial system (1947 - 1983): selected years

Year		1947	1961	1964	1967	1973	1978	1983
Number and types of institutions								
Commercial Banks	(1)	444	332	328	261	115	107	111
Bank Branches	(2)	1783	4949	6389	7357	7931	10222	14336
Savings banks	(3)	-	1	1	1	6	6	5
Branches	(4)	-	561	595	517	608	736	2490
Investment banks	(5)	-	-	-	-	45	39	39
Finance/investment companies	(6)	-	-	-	-	152	119	114
Development banks	(7)	-	1	1	1	14	16	16
Federal	(8)	-	1	1	1	1	1	1
State	(9)	-	-	-	-	13	15	15
Savings/Loans associations	(10)	-	-	-	-	36	36	22
Real estate credit societies	(11)	-	-	-	-	44	40	76
Brokerage firms	(12)	-	-	-	-	569	477	426
Brokerage Houses	(13)	-	-	-	-	414	280	249
Stock exchange	(14)	-	-	-	-	16	12	12
Insurance companies	(15)	-	-	-	-	110	96	95
Credit cooperatives	(16)	-	-	-	-	324	367	530
Other	(17)	-	-	-	-	-	-	74
Other quantitative indicators (%)								
Financial assets/GNP	(18)	41.2	27.2	21.2	25.6	50.5	42.7	52.9
Loans/GNP	(19)	29.6[*]	17.2	13.4	31.8	84.5	108.8	74.7
Monetary assets/total assets	(20)	58.7	84.0	91.5	72.9	38.2	31.3	13.8
Public debt/total assets	(21)	13.3	6.1	1.3	11.9	28.8	26.2	44.9
Banco do Brasil's loans/total	(22)	26.1[e]	29.3	29.5	20.4	15.5	15.0	10.6
Fin.system product/GNP	(23)	3.2	2.5	2.8	3.5	5.2	7.7	11.2
Bank branches per 10^6 inhabitants	(24)	37.0	70	81	86	79	90	112.4

Sources of data: rows 1-17: 1947 to 1978 - *Brazil, a Handbook of Historical Statistics*, 1978. Mass.: Hall and Co.; 1983: Goldsmith, 1986, p. 529; rows 18-22: 1945 to 1978 - Central Bank Bulletin, 1965, table 1.11; 1980 and 1983: Central Bank Bulletin, 39(3), March 1985, p. 150; row 23: IBGE, 1987, pp.118-120; row 24: number of branches from row 7; population from IBGE, 1987, p. 33 (1940) and p. 111 (1947 onwards).
Observation: (*) 1951 data.

As said earlier, despite the underdevelopment of the financial system, a fast process of import-substituting industrialisation took place in the period 1947-61, which was followed by a contraction which lasted until 1966 (Table V.1). The contraction had to do with the decline of investment after a period of intensive accumulation. But the financial structure did represent an important constraint to the resumption of growth: the unsophisticated financial system was inadequate even to finance consumption of durables and medium-term working capital, expenditures which were fundamental to permit the use of the newly installed industry.

In 1964-65 a financial reform was undertaken in order to increase the diversification of the assets and the institutions of the financial system. The logic behind the 1964-5 reform was that financial repression had deterred the development of the financial structure in the 1950s/1960s. This was associated with the usury law and the gold clause, which restricted interest rates to a maximum of 12% a year. It was alleged that low (even negative) real interest rates had reduced the supply of voluntary savings into the financial system and, therefore, the supply of loanable funds available to investing firms was lower than the potential. The national private firms were, according to the same view, the ones to lose the most from this financial repression -as the public firms had access to public funds (such as funds from BNDE) and the international corporations could always count on loans in foreign currency and direct investment from abroad.

The reform was indeed successful in increasing the diversification of assets and boosting the consumption of durables and the housing market, which led the period of high growth from 1967-73 (Table V.2). But far more important than the achievements of the financial reforms seem to be the long-run effects of such reform to the process of economic development in Brazil.

First, in order to raise interest rates, the government introduced indexation - basically of those assets issued and loans granted by the monetary authorities and the public financial institutions. The failure of government attempts to impose the same practice on private institutions, created a severely fragmented financial system - where indexed and non-indexed assets coexisted. This increased the scope for speculation and the fragility of the system.

Second, the highly speculative financial markets and the persistence of

inflation increased, rather than reduced, the risk-aversion of financial institutions and savers. So the private financial system continued to be dominated by the shorter end of the financial operations. The longer-term credit, such as the financing of industrial investment and civil constructions was left to the State.

Third, the reforms further opened up opportunities for firms to borrow abroad, allegedly in order to capture "foreign savings". Given that the reforms had failed to increase the channels of finance for national firms, the result of such openness, associated with the exceptional conditions in the international financial markets in the 1970s, was a boost of foreign borrowing far above the finance requirements of the economy, especially in the period 1967-73. After 1974, the government continued with the growth-*cum*-debt strategy, this time also explicitly stimulating public enterprises to borrow in order to finance the their investment projects associated with the Second National Development Plan.

The inadequacy of the financial system that emerged after the 1964-5 reform and their consequences for the developments in the 1970s are overlooked by the existing literature, in view of the intensity of the disequilibria caused by the subsequent oil shocks and the interest shock. The importance of those shocks is not reduced in our analysis. But emphasis will be placed on the constraints, imposed by the financial structure, in overcoming the challenges of the 1970s.

To sum up, it is claimed here that the financial structure represented (and still does represent) one of the main obstacles to a stable process of development in the country. However, the reforms in 1964-5, rather than solving the main structural weakness of the financial system, worsened it.

V.3. The method of analysis: the Post Keynesian approach and its application to the Brazilian case

The choice of a method cannot be dissociated from the paradigm which underlies the theoretical analysis. For instance, within the mainstream approach, it is only natural that the method should involve a precise specification of the hypothesis and test it. Or alternatively, that two competing hypotheses are specified in such a way that data can discriminate conclusively between them. But as Dow points out:

Leaving aside the methodological problem with this procedure when applied to short-period analysis, it has severe shortcomings when applied to long-period analysis. Over the long period, the very changes in economic structure, institutions and behaviour which are the object of a study of economic development evade capture by formal mathematics or observation by consistent data series (1990: 2).

Our analysis concerns the relation between financial structure and economic development, where, by definition, the institutions and therefore the behaviour of the main protagonists are evolving through time. In this case, more than ever

The scope for universal laws in economics is restricted by the capacity of the economic system to evolve over time; the majority of the general statements must be conditional on the environment in which they are formulated. In particular, as Hicks ... points out, the time element in statements of cause and effect becomes important if structural change can occur during that time period. In order to retain the causal statement, therefore, it must incorporate a statement about behaviour reacting to the structural change, as well as the initial cause. This requirement to account for historical development further impedes the ability of an economist to conform to the traditional rules of scientific enquiries (Dow, 1985: 35).

Therefore, in our case, where the 1964-5 financial reform fundamentally changed the conventions of economic agents, a political economy approach seems more suitable to the analysis of development processes. This approach "... forgoes precision in the narrow sense of amenability to mathematical expression, in the interests of depth and breadth of understanding of complex causal process" (Dow, 1990: 3).

The causal process that will be analysed in the next chapter is the relation between financial and economic development in Brazil from 1947-83. This analysis will be centred on the concept of "functionality" defined in the previous chapter. The main questions that are addressed by the empirical analysis of this thesis are (1) how the 1964-5 financial reform changed the functionality of the mechanisms to finance and fund accumulation; and (2) to what extent the reformed financial structure can be blamed for the severe macroeconomic/financial imbalances of Brazil's development in the 1970s and 1980s.

V.3.1. The structure of the analysis

Testing the functionality of the financial system is to analyse the behaviour of separate, and yet integrated, financial institutions and markets, and their role in financing and funding accumulation. The structure that seems to fit this type of analysis is the following:

First, a summary of the main macroeconomic indicators will be presented for each period, in order to establish the pace of growth and accumulation as well as to indicate the economic agents leading the process of accumulation.

Second, the interrelation between financial structure and economic development will be analysed through the following topics:

◆ the main institutional features of the financial system;

◆ banks and other lending institutions as suppliers of finance;

◆ the stage of development, the size and the volatility of financial markets: their role as suppliers of funding;

◆ the role of foreign capital inflows in financing internal accumulation.

◆ the system's financial robustness and the mechanisms of contagion of instability.

Finally, we analyse the compensating structures - that is the institutional arrangements are created to compensate for the lack or deficiencies of the traditional mechanisms to finance and fund investment - and their shortcomings to the process of development.

Below the theoretical reasons behind this structure are briefly reviewed.

V.3.2. The importance of the institutional setting

Financial systems are institutional environments whereby the command of a significant part of the real resources is determined. In monetary-production economies, the existence of a stage-2 banking system allows the economy to accumulate at a faster pace than previous saving would permit. Since saving is not causally important in the financing of investment, the institutional setting determines a hierarchy in the system, where banks' credit policies and firms' decisions, both

based on their expectations, define the levels of output and employment and thus income.

As regards saving decisions, they will delimit the availability and direction of the supply of funding. However, it is again the institutional setting which determines whether these funds will be functional or not to economic growth. In other words, the existence of developed financial markets will facilitate the redirection of additional savings to funding.

The Post Keynesian theory of finance normally assumes an institutional environment that includes a banking system that has at least reached stage 2, and organised financial markets. However, it also provides the analyst with a theoretical framework to understand the consequences of most LDCs' not having their financial markets developed: on the one hand, credit-based systems provide the economy with a great capacity to accumulate; on the other, they also tend to enlarge financial fragility. Therefore, fast-developing countries must have compensating mechanisms to finance accumulation and to avoid financial instability.

In order to assess the functionality of the financial structure, the institutional analyses must evaluate the inherited institutional setting as regards (1) the mechanisms to finance and fund accumulation; (2) the possible structures created to compensate for the lack of developed capital markets. In the specific case of Brazil, the financial reform of 1964-5 represents the main watershed as regards the mechanisms to finance and fund and, therefore, the functionality of the financial system to the country's development. Accordingly, most of the analysis will be concerned with the comparison of the financial structures and its functionality before and after the above mentioned reform.

Once the institutional setting has been investigated, then the analysis can proceed to description of the behaviour of the most relevant financial agents in the process of financing accumulation.

V.3.3. The analysis of banks and other lending institutions as suppliers of finance

In Post Keynesian theory, growth and investment are determined by entrepreneurial long-term expectations and the availability and cost of finance.

Finance should be sharply distinguished from saving which derives from, rather then being a precondition for, growth. The supply of finance, in economies with a developed financial structure, is determined by the banks and their expectations.

In a banking system from stage 2 onwards, the banks' credit-creating capacity is very elastic and will depend on their expectations and their access to additional reserves, when required. In Brazil's case in 1947-61, the credit-creating capacity of the banking system was significant because of the dual role played by Banco do Brasil as monetary authority and commercial bank. As monetary authority, the Bank had direct access to the Treasury Funds which could, accordingly, accommodate any demand for additional reserves required. Any increase in Banco do Brasil's loans represented a direct increase in the reserve base of other commercial banks.

However, in this period, the mechanisms to fund investment were very underdeveloped. Consequently private investment finance relied greatly on a tripod consisting of government finance (directly through government investment, and indirectly through funds released by public agencies, such as BNDE and Banco do Brasil), foreign capital inflows and self-finance.

In this environment, the pace of growth of the level of activity produced a constant demand for credit on the finance account. From the supply side, inflation affects banks' lending decisions, creating a bias towards the short-term and high levels of liquidity preference. From the demand side, inflation plays a role in the growth of demand for finance by creating increasing "illusory profits" and making the firms more inclined to "Ponzi" financing. This partly explains why private banks could profitably expand simply by lending short and constantly increasing their mark-ups.

If the ceiling of the rate of interest cannot be blamed for the underdevelopment of the financial markets, the usury law did make bond-issuing by the government impossible, especially when inflation rose. This did not affect the government's financing, for the government has an unconstrained capacity to finance its deficit with money issues. But it greatly limited the availability of alternative assets for inactive holders of money. This is why the basic rate of interest for small savings (set by bank deposit rates) remained almost steady at 4%, much below the 12% ceiling on interest rates. Despite the negative real loan rates, banks could maintain high mark-ups in

their loan operations, because the system lived in a constant situation of excess demand for loans.

To sum up, the institutional arrangement to finance investment described above permitted growth, but there were side-effects: inflation, constant government deficits and rising external debt. Furthermore, the functionality of such a mechanism depended on the maintenance of investment growth, low rates of inflation and the continuing refinancing of external debt. Indeed, as inflation rose significantly in the beginning of the 1960s, both the government's financing capacity and the firms' capacity for self-financing collapsed into the crisis which began in 1961.

With the 1964-5 financial reform, indexation was introduced in government bonds and other liabilities of public institutions. Indexation of savings accounts also had the full backing of the monetary authorities. Given their new liquidity, government bonds became the standard in the determination of other assets' own rates. The existence of other liquid indexed assets with non-indexed assets in an environment of persistent inflation made the newly born financial market very speculative from the outset. This speculative demand and the monetary policy became the main determinants of the interest rate in the money market.

The behaviour of the banking system also changed substantially with the financial reform. Until 1964 the bank-dominated financial structure was involved in financing business. The financial reform permitted the development of financial institutions specialising in the financing of consumer durables and housing. But it also permitted the system to profit from the speculative uses of its funds, especially with government bonds. Further, the deliberate policy of government to let banks hold reserves (even their voluntary reserves) in the form of public bonds, not only restricted the scope of monetary policy but also made speculation an alternative means of expansion of the banking system. Indeed, when inflation (and along with it uncertainty) started to rise, the financial institutions' performance became closely linked to the gains related to the refinancing of the rapidly expanding public debt.

V.3.4. The examination of the stage of development, the size and the volatility of financial markets: their role as suppliers of funding

Saving funds, but does not finance capital accumulation. Funding means the transformation of the short-term debts incurred by investing firms into long-term securities issued through the financial markets. As such, the allocation of savings may have an important role in maintaining the financial stability of the growing economy, especially in periods of acceleration of accumulation.

A functional system of long-term financing and funding of modern capitalism requires a certain type of institutional development, including the development of stock markets, specialised financial institutions and institutional investors. This development can be jeopardised by the uncertainty inherent in fast growth, especially if inflation is a structural feature of such process. Inflation increases the risk of capital loss in long-term operations. But the development of growth-supporting, financially stable securities markets can also be imperiled by the pace of growth. For, if financial institutions can comfortably expand by profiting from short-term financial operations, they will have no stimulus to enter into long-term contracts.

The financial reform of 1964-5 correctly perceived the need to develop a private long-term capital market. But it was misguided in assuming that the creation of institutions such as investment banks and the rise of interest rates would *per se* stimulate such development. The analysis of the period 1947-61 suggests that the rise of interest rates would not encourage private financial institutions to venture into long-term operations. That requires either competitive stimuli or special institutional arrangements, and neither of these existed in Brazil at the period.

If the reform did not change the previous tendency to the short term of the private financial system, the introduction of indexed government bonds, which was meant to stimulate saving, had very negative effects on the functionality of the system. Indexation raised the floor of the nominal interest rates offered to asset holders and charged to firms (both nominal and real). This increase did not lengthen the maturity profile of loans to the productive sector. Moreover, the spread of marketable short-term securities did stimulate speculation on which both wealth-holders and financial institutions engaged in.

113

The fact that indexation increased, rather than decreased, the speculative character of the financial institutions partly explain why attempts in 1964-5 to develop a private long-term financial market - through the creation of investment banks oriented to long-term loans and fiscal incentives to acquire shares - were a significant failure. Indeed, investment banks never fully acted as suppliers of long-term funds or represented an important stimulus to the development of long-term securities markets. Also, as part of the speculative bias of the reformed system, the feeble stock market became highly volatile and suffered a crash in 1971.

The failure to develop a private capital market and the rise of speculation generated by the introduction of indexation, created a financial system which was less functional to development than in 1947-61. The result of such a misguided reform was that, when accumulation was resumed in 1974-78, *ad hoc* measures had to be taken to finance long-term investment projects. One of these measures was the rapid enhancement of public sources of funding. Another was the increased use of foreign indebtedness, to which we turn next.

V.3.5. The role of foreign capital inflows in financing internal accumulation

This thesis deals mainly with the role of the financial system in supporting growth in a closed developing economy. However, the importance of the recent Brazilian experience with external debt cannot be left out of the analysis. Without ignoring the "supply side" of the debt crisis (that is, the increase in liquidity of the international banking system in the 1970s and the interest rate shocks which occurred from 1978), the analysis will focus on the "demand side" of the problem. The position adopted in the analysis is summarised below.

If firms do not have access to long-term financing and funding internally, they will resort to foreign borrowing even if they do not require to import capital goods for their investment projects. From a macroeconomic perspective, this will result in increases in the level of investment being pegged by an increase in the external debt, above the required to finance trade of services and goods. This is the starting point of our analysis.

In the period from 1947 to 1961, there was indeed a constant need to finance

an increasing trade deficit created by foreign finance of rapid internal accumulation. Since most private national enterprises (including the public firms) did not have access to credit from the international financial system, the financing of the mentioned gap involved two main mechanisms: (1) direct foreign investment; (2) the transfer of purchasing power in foreign currency from the surplus export sector to the investing national (public and private) firms; and (3) borrowing with the government's help.

The financial reform of 1964-5 opened access to the international financial system for both public and private enterprises. It dismantled the previous controls on loan capital inflows and left a significant part of their allocation to the markets. Furthermore, by reducing the flow of investment funds to public enterprises, it stimulated those firms to borrow directly from abroad. The result of this opening to the international financial system was to provoke an unprecedented increase in the demand for foreign loans in 1967-73, much above the requirements to finance the trade deficit.

From 1974 the access to international financial markets was only useful in a very short period (until 1977), when the oil shock created a severe increase in the trade deficit. But from 1977 the structural tendency to borrow above what was required to finance the trade deficit, imposed by the need to refinance the outstanding stock of debt, was repeated. The cost of such a strategy was to augment the financial vulnerability of the country to the credit conditions in the international market. Finally, with the change of monetary policy in the United States in 1979 and the sharp rise in interest rates, the rolling-over of the external debt became infeasible and the debt crisis dragged the country into the stagflation of the 1980s, the so-called lost decade.

It is important to stress that the development strategy undertaken by the government in the 1970s - the so-called growth-*cum*-debt strategy - was not only caused by a misleading policy during the 1980s. It was also forced by the failure of the 1964-5 reform to develop appropriate mechanisms for financing accumulation domestically, and the lack of alternatives in 1974 for the financing of the Second Development Plan.

V.3.6. The assessment of the system's financial robustness and of the mechanisms of contagion of instability

In credit-based financial markets, an increase in long-term commitments will be followed by rising indebtedness of firms. This leads to a higher degree of general financial fragility, expressed by elevated leverage ratios of banks and non-financial enterprises.

In 1947-61 this fragility was mitigated by the fact that firms used profit inflation as a means of funding their investment. However, as inflation rose and aggregate demand decelerated in the end of the 1950s, this mechanism became increasingly dysfunctional. Intervention by the monetary authorities increased, but was not sufficient to avoid the increase of bankruptcies in the productive sector and the collapse of financial institutions and the "curb" market for bills of exchange.

The financial reform did not reduce this tendency to fragility; in fact it increased. First, the introduction of indexation raised the nominal interest rates. Second, because of the commitment to stimulate internal saving and attract external saving, the monetary policy targeted the real interest rate during almost the whole of the 1970s. This increased the external and internal debts disproportionately. The speculation by both private financial institutions and firms in financial assets (especially government bonds) created an intricate network of financial commitments. The stability of this network increasingly depended on the government's expanding the internal public debt.

The debt of the corporate sector also expanded significantly in the 1970s, because of both the rapid accumulation and the high interest rates in the period. This meant that, once aggregate demand started decreasing in the 1980s, the financial assistance of the central bank to financial institutions had to rise. Nevertheless, this was not enough: bankruptcies increased again. The surviving firms had to go through an intensive process of financial restructuring. This was made possible by significant transfers of government funds to the financial system and, indirectly, by the private sector's capital gains from dealing in government bonds.

V.4. Conclusion

This chapter has established the method that will be used and the structure of the analysis of the case-study, which compares the functionality of Brazil's financial system before and after the financial reform of 1964-5 until 1983. The structure of the analysis of each period will be analysed according to the criterion of functionality as defined in the previous chapter. The structure that seems to fit this type of analysis is the following. First, a summary of the main macroeconomic indicators will be presented for each period, in order to establish the pace of growth and accumulation as well as to indicate the economic agents leading the process of accumulation. Second, the interrelation between financial structure and economic development will be analysed through the following topics:

♦ the main institutional features of the financial system;

♦ banks and other lending institutions as suppliers of finance;

♦ the stage of development, the size and the volatility of financial markets: their role as suppliers of funding;

♦ the role of foreign capital inflows in financing internal accumulation.

♦ the system's financial robustness and of the mechanisms of contagion of instability.

Finally, we analyse the compensating structures - that is the institutional arrangements which are created to compensate for the lack or deficiencies of the traditional mechanisms to finance and fund investment - and their shortcomings to the process of development.

Having defined this structure of our method, a detailed empirical analysis will follow in chapters 6 to 8.

VI. FINANCIAL SYSTEM AND INDUSTRIALISATION
IN BRAZIL: 1947-66

VI.1. Introduction

During the period 1947-66, Brazil lacked developed mechanisms to finance and fund accumulation. Long-term finance was limited to two government banks, whereas private lending institutions confined their operations to short-term loans for working capital. Financial markets were poorly developed and dealt in few securities. Finally, access to foreign loans was limited to official loans from governments and multilateral agencies. Despite the shortcomings of the financial structure, the Brazilian economy grew 7.6% per year on average and investment over GNP was 15.8% between 1947 and 1961. This extraordinary growth changed the economy from a primary exporter with a nascent non-durables industrial sector into a relatively mature economy with a small import coefficient, diversified consumer non-durables and durables sectors and a budding capital goods sector.

In the light of the approach set out in the previous chapters, here we investigate how this rapid industrialisation was possible despite financial underdevelopment, without causing financial instability. We then discuss the institutional arrangements - or compensating structures - created to overcome the limits of the financial structure. Further we indicate how the economic downturn in 1962-66 is associated with the mismatch between the financial and the economic development in the period.

The rest of the chapter is divided into five sections. Section VI.2 discusses the main macroeconomic trends in the period 1947-66, focusing on the pace of accumulation and structural changes, and their consequences as regards the financial requirements of the economy. Section VI.3 analyses the financial structure in the 1950s and outlines the difficulties that it would have created for the process of fast

development. Section VI.4 examines the compensating structures created in the period. Section VI.5 identifies the limits of these compensating structures and the role of these limits in the downturn of 1962-66. Section VI.6 summarises the analysis and presents the conclusions of the chapter.

VI.2. The pace of growth and accumulation

VI.2.1. A brief review of the political economy of growth

Since its first stages, Brazilian industrialisation has been led by the process of import-substitution. This process began as a spontaneous response to the import constraints, caused by the decline of international trade during the World recession of the 1930s and then the Second World War (see Malan et al, 1980). Industrialisation in itself had caused several changes in the structure of the economy, which in turn had political effects. These were, for instance, expressed by the political demands of the urban working class and the industrialists.[63] The economic and political stage was thus set for the populist governments of the 1950s, and industrial policy increasingly became a part of the political agenda.[64]

Perhaps the first indication of the strength of the new political forces was the government's choice of restrictive measures to deal with balance of payments problems in 1947.[65] These measures clearly protected the indigenous industrial

---

[63] In 1940 31.2% of Brazil's population lived in the urban areas; already in 1950 this proportion rose to 36.2%; and in 1960s, 44.9 %. Ludwick (1978: 57-8).

[64] See ECLA, 1964: 153. In the 1950s/60s this interventionist approach to development was shared by most international development agencies, such as the United Nations agencies (especially the Economic Commission for Latin America, ECLA) and even by the American government. On this see FitzGerald (1989).

[65] During the war, Brazil became a main supplier of primary goods to the belligerent nations. In addition to the forced decline in import, this caused a fast accumulation of international reserves of US$ 9,399.0 million. However, a significant part of these reserves were not convertible (Malan et al, 1974: 394) and most of them were quickly depleted with the end of conflict. This quick depletion was due to three main factors. First, the demand for consumer and capital goods was very repressed during the whole war period. Second, after the fall of the Vargas dictatorship government, the provisional Dutra government assumed a liberal exchange policy, by abolishing the official exchange market (Instruction 17 of 1947) and an "open door" policy to imports. This policy stimulated imports significantly: the exchange rate of Cr$ 18.50/US$ was fixed until 1953 (despite the average annual

sector and guaranteed the continuation of the import-substitutive industrialisation. Already in 1948, the choice for industrialisation became transparent as President Dutra's government requested planning aid from the United States government to evaluate and propose solutions for the problems of the Brazilian economy. Although the report of that joint Brazil-United States Commission did not constitute a plan in itself, and the promised credit of US$ 500 million was never actually granted, many of its recommendations were carried out.

In 1951, under President Vargas, another joint Brazil-United States Economic Development Commission was created with the specific purpose of providing technical assistance to "speed up the preparation of applications for loans for the development projects which would be submitted to United States and international lending agencies" (Ludwick, 1978: 367).[66] The commission's report resulted in the Plan for Retooling and Stimulating the National Economy and the creation in June 1952 of the National Bank for Economic Development (BNDE), which was to be responsible for executing the plan. The founding of the BNDE in 1952 was the first step towards raising and allocating funds to finance the high levels of accumulation anticipated. A second important step was taken in October 1953, when the monetary authority (SUMOC) instituted Instruction 70, a five-compartment exchange system in which the government ranked imports according to their essentiality. More than just being a simple solution to the balance-of-payments problem, Instruction 70 represented a stimulus for industrialisation for at least three reasons: (1) by raising the internal prices of specific imports, it consolidated protection for producers of industrial goods which were in process of substitution; (2) it provided the concession of exchange subsidies for capital goods and basic inputs required for the process of industrial development; (3) with the additional revenues obtained by the auctioning of foreign currency to importers of "non-priority" goods, it raised public funding for

_____

inflation of 15%) and taxation on exports was almost absent (see Lessa, 1982: 16-7). Third, "allied countries", such as the English, used their political influence to force the Brazilian government to accept physical assets in the country (such as railways) in the repayment of outstanding debts (see Pereira, 1983: 22-23).

[66] The political background of the American commitment to the industrial development in Brazil can be found in the deepening of the "cold war" and the fear that the political tensions created by a frustrated process of development would result open ways to the "red threat". The solution was to enhance a market development, based on private enterprise. On this see FitzGerald, 1989.

government investments in infrastructure. Furthermore, in terms of investment finance, Instruction 70 represented a purposeful transfer of purchasing power in foreign currency from the import sector to the developing industrial sector. This was a feature which was to characterise the process of industrialisation from then until the 1960s (see Leff, 1967: 16-7).

Political commitment to industrialisation was also an essential feature of the 1955 election campaign. The newly-elected Kubistchek administration, which during the campaign had promised to make Brazil "grow 50 years in 5", created the Council for Development in the beginning of 1956. This was directly linked to the presidency and was responsible for the planning and execution of a development plan. Based almost entirely on the recommendations of the Joint US/Brazil Technical Commission, and those of the United Nations Economic Commission for Latin America/BNDE Joint Commission, the Council for Development put forth in 1956 an audacious 5-year development plan - the *Plano de Metas* (Targets Plan).

The plan aimed to intensify the process of import substitution of industrial goods. Industrialisation was to be through the integrated development of a domestic consumer durables sector, an intermediary industry and an adequate energy and transport sector. In particular, the government allocated 92.3% of the forecasted budget of public investment to investments in transport, basic industry and energy. The consequence of such a plan was the extraordinary process of growth and accumulation during the period from 1956 to 1960, which is analysed below.

VI.2.2. The pace of growth and accumulation: 1947-66

In the period from 1947 to 1961 Brazil's economy grew on average by 7.0%, and GNP per capita rose 4.2% p.a. The industrial sector led this growth with an average rate of expansion of 8.7% p.a.. Not only was the pace of growth significant, but the rate of accumulation was high and increasing (see Figure VI.1 and Figure VI.2 below). From 1947 to 1955 the ratio investment/GNP ranged from 12.3% (1948) to 16.7% (1954). With the government committed to industrialisation, the heavy investment in infrastructure and physical capital took the ratio of investment to GNP from 16% in 1955 to 21% in 1959 (Table VI.2).

121

Figure VI.1 - Yearly real growth in 1947-66
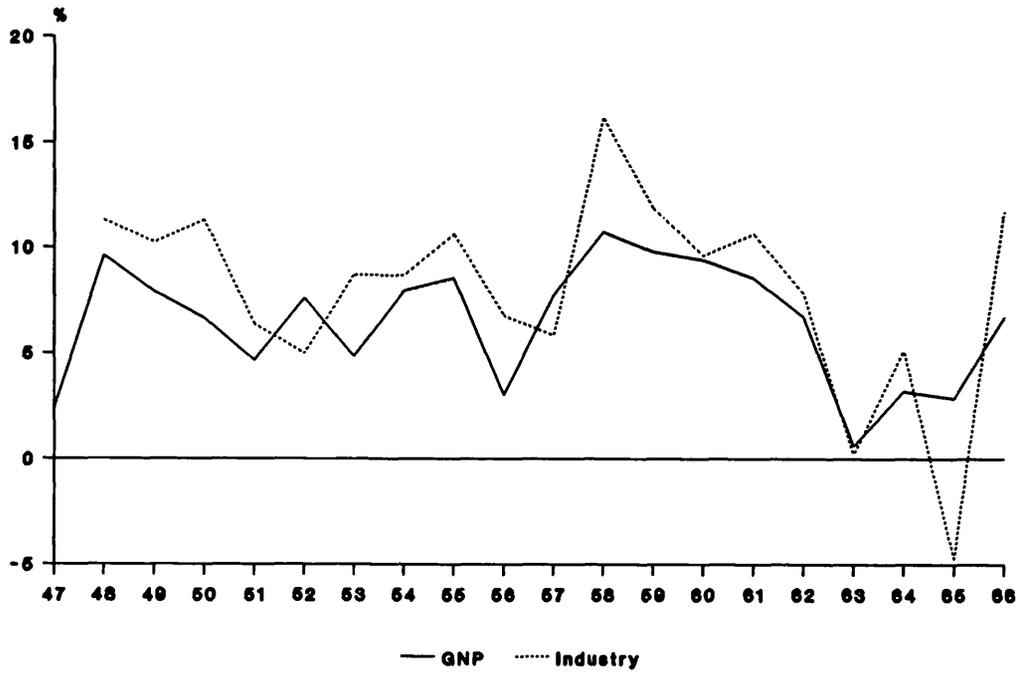
Source: Table VI.1.

Figure VI.2 - Investment as percentage of GNP
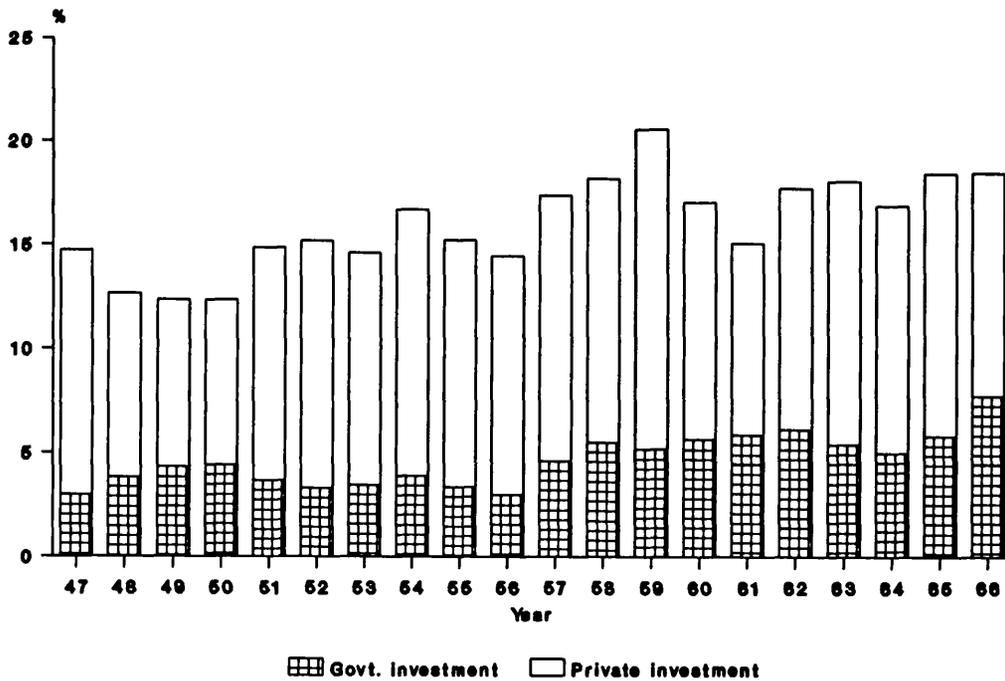
Source: Table VI.2.

122

This fast pace of growth and accumulation changed the productive structure of the economy significantly. In addition to the construction of the new capital, Brasília, in the short period from 1956 to 1960, the automotive, ship-building, and heavy electrical materials industries were set up and, furthermore, basic industries such as steel, nonferrous metals, heavy chemistry, oil and cellulose industries were considerably expanded.[67] In a nutshell, the industrial sector consolidated its leading position in the sectoral distribution of GNP (Table VI.3) and for the first time in Brazil's history, the internal market became the main determinant of growth.

Another important consequence of the development of the 1950s was the increase of the average size of the industrial firms. Now large companies, both national and multinational, predominated the family-owned businesses. Furthermore, these firms were installed to produce mainly for the internal market, using internal resources. As a consequence, the ratio of imports and exports over GNP fell from 22.7% in 1947 to 11.0% in 1961 and to 10.4% in 1966 (Table VI.1), whereas the proportion of imports in the total internal consumption of industrial goods decreased from 15.6% in 1949, to 11.3% in 1958 and 9.7% in 1961 (Tavares, 1972: 92). In turn, the share of durable consumer goods in the composition of imports fell from 10.3% in 1935-39 to 2.4% in 1964 (Fishlow, 1972: 44).

The effects of these structural changes on the financial requirements of Brazil's economy cannot be exaggerated. On the supply side, the newly-established industrial structure was highly dependent on medium-term credit to finance its operations (see Tavares, 1972: 127-152).[68] On the other hand, the durables sector had been the fastest growing sector in the 1955-61 period, its productive capacity having increased far ahead of existing demand. Given poor income distribution, the existence of term sales to finance the consumption of durables had become essential for the full use of this sector's capacity.

Given the gap between financial and economic development, it is not surprising that once the investments of the Targets Plan matured, the economy

---

[67] See Lessa (1982) for detailed data on growth of specific productive sectors in this period.

[68] This partly explains the emergence and rapid growth of the market for discounting bills of exchange in the beginning of the 1960s. This market was to become the only private source of medium-term credit in Brazil. More on the development of this market below.

entered a recession.[69] The decline of private investment and, consequently, of the rate of growth brought further destabilising consequences, as inflation accelerated (from around 10% in 1958 to the unprecedented level of 90% in 1964) and the government budget deficit rose (from 1% of GNP in 1959 to 2.2% and 2.9% respectively in 1961 and 1962). In addition, there was a significant deterioration of the balance of payments because of the increasing financial costs associated with the outstanding external debt.

The deterioration of the economic environment increased the pressure on the government for stabilisation.[70] Two adjustment programmes were attempted between 1962 and 1966: one from the end of 1962 to 1963 (the three-year plan) and another from 1964 to 1966 (the government's action plan). The short-lived 1962 plan was a mixture of gradualist but orthodox monetary and fiscal policies, which anticipated a reduction in the government budget and restrictions on loans from Banco do Brasil. As regards the balance of payments, the plan proposed an exchange rate policy which would stimulate exports and discourage imports.

Despite very strict monetary policy from 1962 onwards (see Table VI.4), the reduction of government subsidies plus an increase of 56.2% in the minimum wage in January 1963 accelerated, rather than reduced, inflation. The credit squeeze resulted in an intensification of the political pressure on the government to ease its monetary policy.[71] With the money supply and inflation increasing beyond

---

[69] Investment over GNP declined steadily from 20.6% in 1959 to 15.1% in 1961 and the decline of accumulation was more intense in the private sector, whose investment decreased in real terms by 19.1% and 12.1%, respectively in 1960 and 1961; government investment continued to grow (19.3% and 12.8% respectively in 1960 and 1961); (2) the decline in the growth of GNP from an average 7.6% in the period 1947-61 to 6.7% in 1961 and then a decline of 0.6% in 1962; though this affected all the productive sectors, it was the industrial sector which had the greatest reduction in the rate of growth, contracting by 4.7% in 1965.

[70] Even at the beginning of the economic slow-down, the political demands on the government became polarised, with some sectors demanding stabilisation and resumption of growth and others demanding structural reforms, which included land reform and income redistribution. The existence of such divergent demands was a direct result of the characteristics of the industrialisation of the previous period, which accelerated the process of urbanisation and "proletarisation" of the working class without attempting to reduce the income distribution gap between different economic strata. However, even though this subject is of importance in understanding the future of the Brazilian economy, it is beyond the scope of this thesis. See Dreyfuss (1984) for an extensive analysis of the political environment in the period.

[71] See Resende, 1982: 770.

projections, the three-year plan lost political support and failed soon after its implementation.

A second stabilisation plan was to be tried in 1964 by the military government, which had overthrown the elected government of President Goulart in March of that year. The military *junta*'s plan for economic action (PAEG) had an approach very similar to the three-year plan: (1) rigorous control over money and credit expansion; (2) rigid control over public expenditures and an emergency fiscal reform in 1965; and (3) strict wage policy and control of commercial and residential rents and prices of goods and services produced by public enterprises.

The emergency fiscal reform involved rises in federal government's revenues through changing some of the mechanisms of taxation and the centralisation of receipts from the States to the federal union.[72] The reform did allow a significant reduction of the public deficit from 2.8% of GNP in 1964 to 0.9% in 1966 (Table VI.9). However, despite the rhetoric government's capacity to control the money supply was limited just as it had been under the 1962 plan: even though the monetary base decreased in the fourth quarter of 1964 and first quarter of 1965 (respectively - 8.0% and -4.6% p.a), in the last period M1 and M2 rose above inflation. Therefore, the key to the success of the plan in reducing inflation from 1965 onwards (Table VI.1) is to be found neither in fiscal nor in monetary policy, but in the wage policy that was implemented. This involved the readjustment of the minimum wage, wages of public servants and of workers in the private sector, according to an official index which was repeatedly below inflation. This procedure significantly compressed the real wage in a short period of time.[73]

---

[72] A summary of these reforms can be found in Moura e Silva (1979: 10-1). Two are worth mentioning here: (1) the introduction of monetary correction for fiscal debts, which reduced the stimulus for postponing payment as inflation grew; (2) the centralisation of the fiscal administration in the federal government and prevention of Congress raising the total government expenditure in the federal government budget.

[73] According to Resende (1982) the real minimum wage in Rio de Janeiro in March 1967 was only 83% of its correspondent in January 1952. Even though the decline of the real minimum wage began in 1959, it is in the period 1964-66 that it suffered its heaviest loss. The table below reproduces the indices of the real minimum wage from Resende (1982: 779):

Period	01/52	06/54	07/56	01/59	10/60	01/63	03/64	03/65	03/66	03/67
Index	100	127	135	146	136	122	126	103	91	83

Despite the reduction in the rate of inflation from the 84.2% in the last quarter of 1964 to 31.4% in the last quarter of 1966, the social costs of the 1964 stabilisation programme outstripped the benefits. For instance, in a country where income distribution in the 1960s was already one of the worst in the World (see Serra, 1982: 64 for data), the compression of wages and the stagnation of output caused a sharp decline in the urban population's standard of living (Resende, 1982). The political costs were also significant, as the *junta* launched a wave of repressive interventions in unions and popular movements. This repression inaugurated a dark period of political persecution, especially after 1968, which would last until the mid-1970s. As if these social and political costs were not sufficient, the draconian stabilisation programme could not in itself tackle the causes which had triggered the recession. One of these causes, as said earlier, was the mismatch between financial and economic development - to which the next section draws attention.

VI.3. The mismatch between financial and economic development in the 1950s and its consequences

To a great extent, the mismatch between economic development and the evolution of the financial structure corresponds to the macroeconomic trends in the period from 1947 to 1966. First, the shortcomings of the inherited financial structure put a constraint on the continuation of industrialisation, which contrasted with the political will to hasten the pace of growth and accumulation. This led the government to promote financial innovations as mechanisms to finance investment. These innovations, or compensating structures, permitted the intensive import-substitutive industrialisation of the period, but at the cost of further widening the gap between economic and financial development. Second, it was partly the lack of medium-term and long-term finance which limited the country's growth prospects in the end of the Targets Plan, leading the economy into recession. The articulation between financial development and economic development will be analysed in this section, which starts by outlining the main features of the financial structure inherited from the 1940s.

126

VI.3.1. The institutional heritage

The financial system of the 1930s was essentially a carry-over from the late 19th century. Given the fact that Brazil was mainly a primary exporter, this system concentrated on financing export production and trade, and contributed to infrastructural development only to that extent. Most of the undertakings which required long-term financing were owned by entrepreneurs with a direct link to the developed financial markets abroad. For instance, the railways were almost exclusively owned by British companies and linked coffee producing areas to ports; most of them received direct financing from British banks (Sochaczweski, 1980: 17-18).[74]

The financial requirements changed after the 1930s because of the process of industrialisation. First, the emerging industrial sector demanded short to medium-term financing for working capital, which could not normally be based on collateral. Second, investment in industrial plants required longer term financing to which the banking system was not normally used. And finally, the increasing level of internal activity generated a growing demand for infrastructural services, especially transportation and energy - services whose provision normally requires great volumes of financing with long maturities.

VI.3.2. Financial development in the 1950s

In the 1950s, the financial structure developed largely in response to the government's pragmatic attempts to rather solve the problem of financing accumulation. An assessment of this development is best begun by analysing the formal structure of the financial system. In 1947, the monetary authority in Brazil

---

[74] As Sochaczweski (1980: 25) points out, until slavery was abolished (in 1888), the demand for long-term finance came mainly from producers wanting to acquire slaves; this was usually supplied by the slave traders themselves. Working capital needs for the extensive agriculture practised then (especially coffee) were low, since there were almost no wage costs and the raw material consisted basically of seeds saved for production. It is only when the slave trade was abolished that working capital needs increased (in order to pay wages to the immigrant workers) at the same time, as the main source of collateral for loans (slaves) disappeared. Not surprisingly, in 1888 banking regulation forced the banks to make rural loans and the parliamentary Decree which abolished slavery was followed by the determination that Banco do Brasil would provide grants to support former slave owners.

comprised the Superintendency of Money and Credit (SUMOC) and the Exchange Department and the Mobilisation Department of the Banco do Brasil. These divided (chaotically) the regulation of the financial system: the Treasury had a monopoly over currency issue; the SUMOC regulated monetary and credit policies but had no executive powers; and finally, Banco do Brasil was simultaneously the government's bank, a commercial bank and a development agency.

The banking system dominated the financial structure. In the period 1947-61 monetary assets were more than 60.0% of total assets, and the banking system was responsible for over 80% of the total loans to the private sector. In turn, the Banco do Brasil accounted for no less than 26% of the loans (see Tables VI.7.2 and VI.8.2). The bank acted as a central bank, receiving deposits from other member banks as legal reserves and, because of its role as financial agent of the government, the Treasury maintained an account directly with Banco do Brasil. Given its privileged position as a monetary authority and commercial bank, the creation of deposits by the Bank represented an almost straightforward increase in reserves for the whole banking system. Therefore, it was the Bank's lending policies which determined the amount of reserves on which banks could expand their own loans.

Regarding the financial markets, there were stock markets in all state capitals and in Santos (in the state of São Paulo). However, only in Rio and São Paulo were there dealings in shares and public bonds. In the remaining capitals, the main activity of stock markets was not to deal in securities, but to auction foreign currencies held monopolistically by the monetary authorities and negotiated through publicly appointed brokers. Even in Rio de Janeiro and São Paulo, the lack of interest of most brokers in stock transactions and the thinness of the markets were such that most issues were made outside these institutions.[75] Therefore, even though the proportion of share subscriptions in cash to the total issues of shares ranged from 6.3 % (1950) to 15.4% (1956) (Table VI.5), only one quarter of this amount is estimated to have been issued directly in stock markets.[76] Considering that total share buys never

---

[75] Indeed the role of the stock market was so limited, that stock exchange indexes only appeared in 1954 (*Conjuntura Econômica*, November 1972, pp. 49-52).

[76] Estimates from MiniPlan-EPEA, 1965, p. 59.

represented more than 14% of total investment, this means that issues of shares through stock markets provided less than 4% of the funds available to investment.

There are at least four reasons for the underdevelopment of the financial markets. As mentioned earlier, up until the 1950s most of the firms in Brazil were family-owned. Second, the poor income distribution made even the prospects of the development of institutional investors very limited. Third, inflation and the relative illiquidity of most shares - see for instance the turn-over ratio of shares in Table VI.5 - made the holding of a share a very risky business. Finally, the prices of shares in the period were very volatile and actually declined in the 1950s (see column 9 of the aforementioned table).

Given the poor development of financial markets, when studying the mechanisms to finance investment in the 1950s the analyst must turn to the role played by banks and other lending institutions. This is our next topic.

VI.3.3. Banks and other lending institutions as suppliers of finance

Not only was the financial structure poorly diversified, but also largely restricted to providing short and medium-term credit. Except for the official banks, the banking system specialised in the provision of short-term credit (30, 60 and 90 days) which was eventually renewed, often for as long as four or five years, at floating interest rates (*Conjuntura Econômica*, 1972: 54). Medium-term finance was mainly provided by Banco do Brasil, other official banks and, after 1959, finance companies. The main sources of long-term financing were: (1) Banco do Brasil (especially for agriculture); (2) the National Bank of Economic Development (BNDE), after 1952; and (3) the federal savings bank (*Caixa Econômica Federal*).

There were two main legal ceilings on deposit and loan rates: the usury law and the gold clause. The usury law (Decree 22.262 of 1933) limited nominal interest rates on almost all financial transactions to 12%, whilst the loan rate to agriculture was further limited to 6%. The gold clause (Decree 23.501 of 1933) declared null any contract denominated in gold or foreign currency, so that any kind of indexation was legally prohibited. Many analysts have blamed such ceilings and inflation for what is assumed to have been a period of excess demand for credit (e.g. Simonsen, 1969 and

Lees et al, 1990: 15). There is a great misunderstanding about both the actual performance of the lending institutions in the 1950s and the causes behind such a performance. Because this is an important issue in understanding the shortcomings of the financial reform of 1964-5, a brief analysis is in order.

As Table VI.7.1 shows, it was a fact that time deposits in the banking system decreased on average by 7.4% yearly in the period 1947-61. It is also true that this was partly related to the negative interest rates caused by the association of the usury law and creeping inflation. However, this did not stop Banco do Brasil and the other commercial banks from increasing their loans, in real terms, at an average of 2.4% a year in the period (Table VI.8.1). Besides, given that in an inflationary context the maturities of loans tend to be reduced, and these data are based on end-of-period balances (and not on flows), this rate actually underestimates the growth of the volume of loans supplied by the banking system.[77]

Furthermore, even though the usury law might have represented a threat to the normal operations of the system, in practice the private lending institutions did find ways to by-pass this legal imposition. On the one hand, it was a normal procedure for banks (especially private ones) to charge commissions and request an average deposit balance from their borrowers. Such a hidden charge allowed the banking system to maintain a substantial differential between loan and deposit rates, and thus to obtain substantial profits (despite increasing costs) (Figure VI.3).

Finance companies (financeiras) operated a market in exchange letter discounts and also charged higher loan rates. This may explain why this limited segmentation in the financial market could hold even when inflation, especially in the mid-1950s and 60s, went far beyond 12%, the legal nominal interest rate ceiling (Table VI.6).

This behaviour by the banks and finance companies is compatible with the view expressed in chapter III above that a high level of real growth will lead to a continuously growing demand for finance. This leaves commercial banks in the comfortable position of assured demand and rising profits (see Figure VI.4), by restricting their operation to the very short term, especially when creeping inflation is constantly expanding the risk of longer term operations (see Beckerman, 1983).

---

[77] See Tavares, 1972: 146.

130

Figure VI.3 - Inflation and the spread between real bank deposit and loan rates (%)
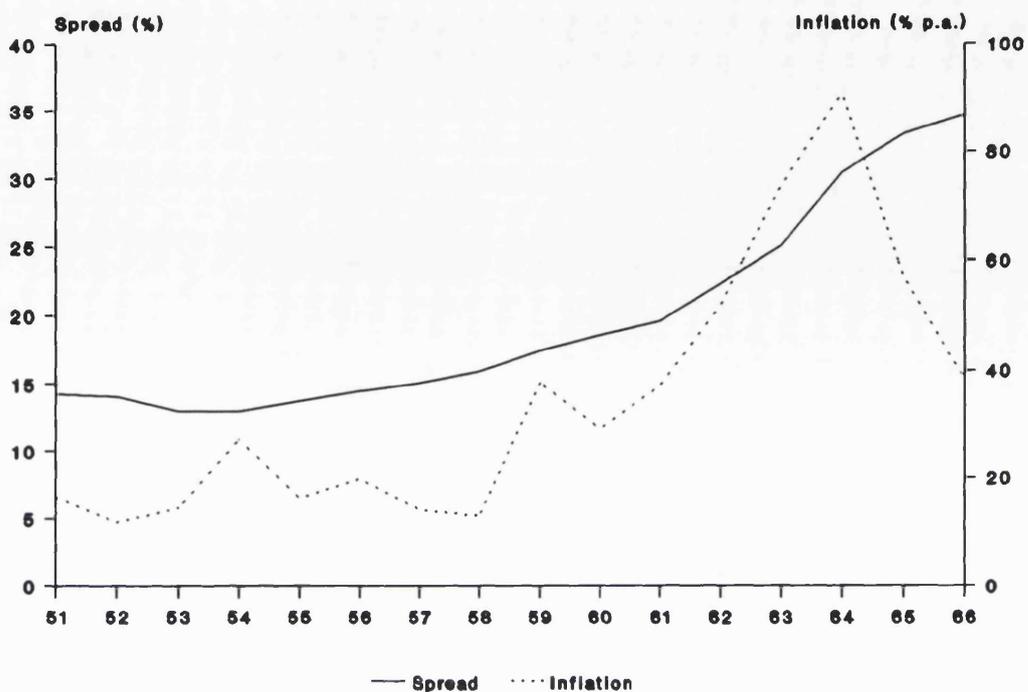
Figure VI.4 - Profitability of the 20 biggest commercial banks
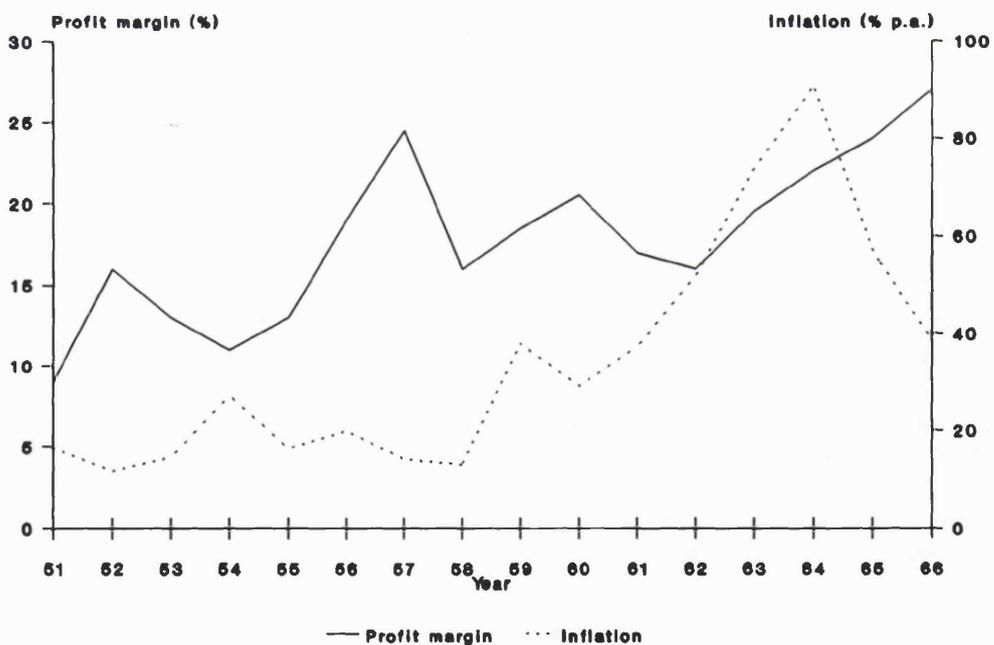
Source: Portocarrero de Castro (1981: 1)

Hence, it is legitimate to ask whether the lack of long-term private finance in the period was due to financial repression or to the lack of interest of the financial

131

institutions in operating in the long term. Given the good performance of banks operating in the short term and the non-existence of funding mechanisms, it is likely that the banks would not have had much incentive to risk long-term positions even if they were allowed to offer and charge real positive rates of interest.[78]

To sum up, the mechanisms to finance and fund investment were both very limited in this period. It remains to indicate what were the compensating structures created to overcome the shortcomings of the financial structure and the limitations of these structures from the point of view of their functionality to development.

VI.4. The compensating structures: functionality and shortcomings

Fast growth was only possible in the 1950s because the main investing agents (the State, international enterprises and national firms) found ways of by-passing the lack of long-term financing with specific institutional arrangements. These arrangements and their limits are discussed below.

VI.4.1. The financing of public investment

After the war, and after a very brief period of liberalism (from 1945 to 1947), interventionism returned to Brazil's politics. Government intervention in the period 1947-61 can be divided into two sub-periods: before and after the beginning of the Targets Plan (1956-61). Under the Targets Plan, the government's share in total fixed capital investment increased from 22.1% in 1956 to 39.0% in 1960,[79] representing an almost steady average annual rate of growth (around 20%) of total government expenditure on capital formation (Table VI.2). This rising investment effort contrasts with the relatively small taxation base of the country and the thinness of the market

---

[78] This hypothesis is further analysed in Chapter 8 when the effects of introducing indexation following the financial reform of 1964-66 are discussed.

[79] These figure do not include the expenditures with the construction of Brasilia. According to Sochaczweski (1979: 113), the majority of the financing of the new federal capital actually came from public funds, in the following amounts (in constant 1961 thousand cruzeiros): 1957: 8,000; 1958: 11,000; 1959: 23,000; 1960: 35,300; 1961: 16,300. Leff (1968: 39) claims that if those expenditures were included, the government's share in the total capital formation would be the following: 1957, 51.2 %; 1958, 46.5%; 1959, 58.8%.

for government debt. As regards the former, most of the taxes were *ad valorem*, and tax revenues were small relative to the gross national product. In contrast, government expenditure as a proportion of GNP increased at a much faster pace, so that the public deficit tended to increase in the periods of intensive accumulation.

Figure VI.5 - Government's effective deficit as percentage of GNP
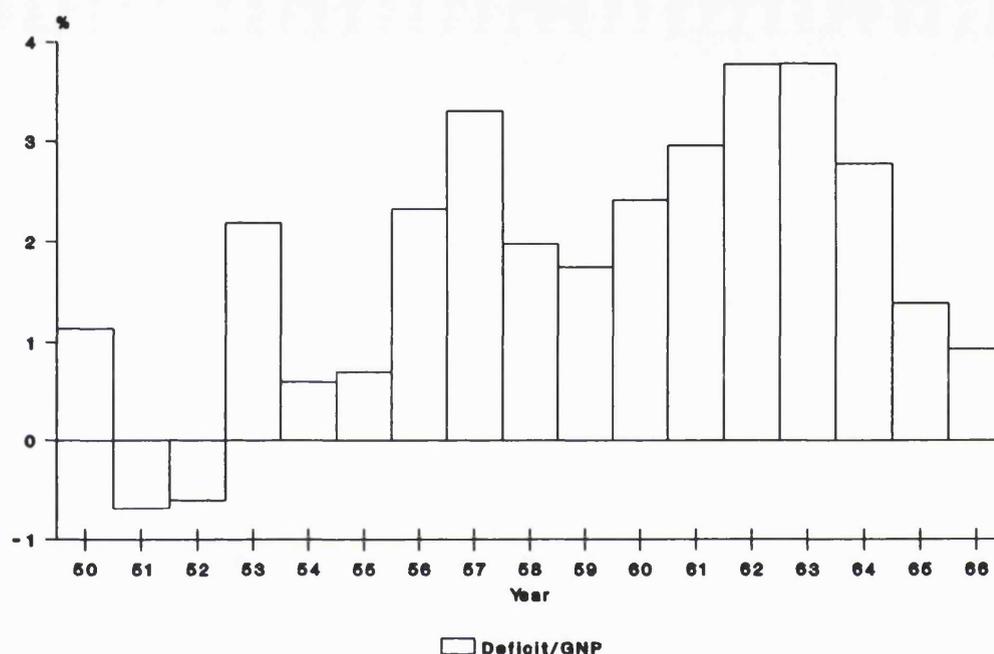
Source: Table VI.9.

The possibility of financing the deficit - leaving aside public investment - by issuing bonds was even more difficult than increasing ordinary taxation. For, the usury law limited the government to issuing bonds with a return of 12%, a ceiling which private institutions and the curb market could find ways to by-pass. This meant that the government's capacity to get the public to hold bonds voluntarily was inversely related to the rate of inflation. Indeed, the proportion of government bonds in the total financial assets decreased from 9.1% in 1947-55 to 2.6% in 1955-61.

After 1952, the government could also count on the newly-created National Bank for Economic Development (BNDE) to finance public investment. However, the BNDE was not, strictly speaking, a bank (since it could not accept or create deposits); its main source of funds until the mid-1960s was the additional income tax

133

for the re-tooling of the economy.[80] Therefore BNDE's capacity to finance investment was very limited in quantitative terms.[81] Over the whole period, the BNDE's contribution never represented more than 20% of the government's total investment - or 4% of total capital formation in the country - despite the extraordinary average increase of these funds in real terms (10.9% p.a.), especially during the period of the Targets Plan (11.8% p.a.).

The two sources of financing left to the government were the extraordinary taxes and credits drawn against the national central bank (money issue). As regards the extraordinary taxes, two are worth mentioning: the extra-budgetary export tax and exchange confiscation. For instance, Instruction 70 (already discussed above) allowed the government to yield revenues with the exchange rate premium between selling and buying prices. According to Leff, the extra-budgetary revenue provided by these means represented 16% of the federal government's tax revenues on average in this period (1968: 15-16). Table VI.10 further indicates the funds created in the 1950s and their significance in the financing of public investment.

The government's direct access to the finance provided by the Banco do Brasil also represented a very functional arrangement in facilitating the financing government expenditure. For, since the Banco do Brasil was also the government's tax collector, the deposits created to finance government expenditure would generate inflows in the form of tax receipts through the tax multiplier.

Figure VI.5 indicates that the current account (*conta movimento*) that the Treasury maintained with Banco do Brasil provided the most significant part of the financing of the government's increasing deficit until 1964. It was the possibility of counting on credits from Banco do Brasil and on extra-budgetary taxation that allowed the government to proceed with its investment projects without any financial planning (on this see Lessa, 1964). Interestingly, this financial arrangement also provided the

---

[80] This tax was created in 1951 by Law 1518 of 24/11/1951 and was valid until 26/11/1966. The additional rate was 15% on personal income and retained profits. The tax was partially refunded after 5 years with 25% additional bonus in ORE (special bonds) and its total amount could be claimed in 20 annual instalments.

[81] In qualitative terms however it represented a great support especially for public enterprises, to which 90% of its funds were allocated. The BNDE was, and has remained, not merely a development bank but a development agency and a research institution as well.

private sector with sources for its own investment, an issue that is discussed below.

Figure VI.6 - Credit drawn on Banco do Brasil to finance the government's deficit (% of the total sources of finance)
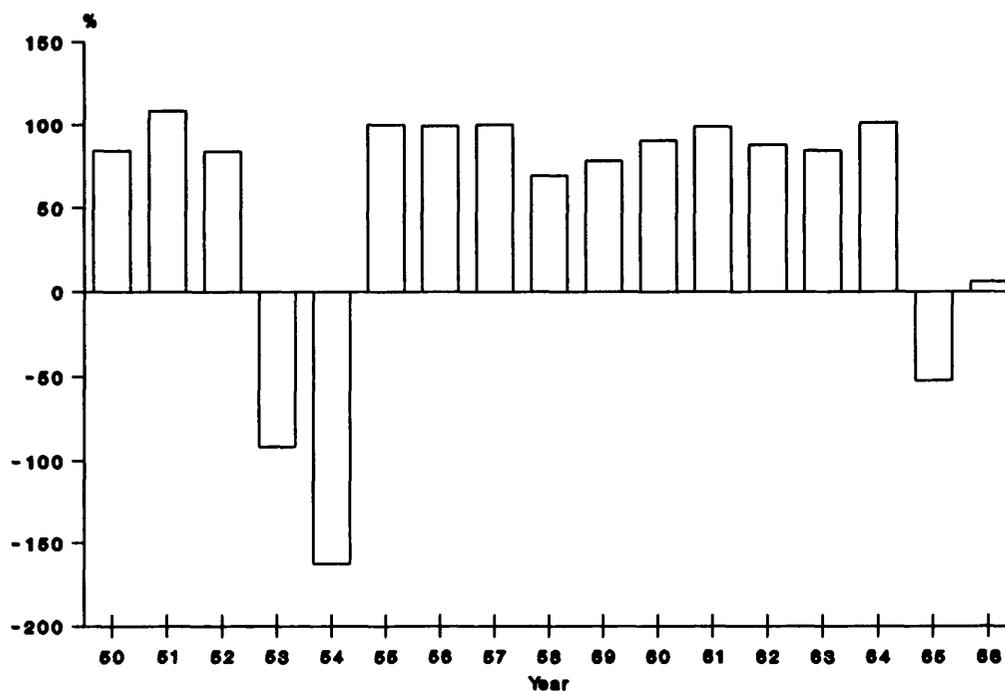
Observation: negative values indicate surplus of the government account.

VI.4.2. The financing of the corporate enterprises

The underdevelopment of the financial structure was not much of a problem for foreign investing firms. Most of their investments were made under Resolution 113 of 1955, which modified the exchange rate system so that foreign private investors in high-priority sectors could import capital goods at a lower exchange rate. Resolution 113 also allowed foreign firms to register their capital at free-market rates and to remit up to 10% of capital yields at privileged rates. Finally, because that profit remittances corresponded with registered capital, foreign firms not only had privileged rates when registering their investment, but also the security of being able to remit substantial volumes of foreign currency if circumstances required. Furthermore, foreign borrowing in the form of interest remittances and the amortisation of loans could take advantage of favoured exchange rates (of up to 8%

135

of the outstanding debt), provided that the credit had maturities of 5 years and above. These incentives, and the favourable climate for foreign investment deliberately created by the Kubistchek administration, did succeed in attracting increasing amounts of foreign investment from other countries. However, this amount should not be overestimated: the participation of such investment in total fixed capital formation during this period never exceeded 4% (see Figure VI.7).

Figure VI.7 - Net foreign investment as a percentage of total investment
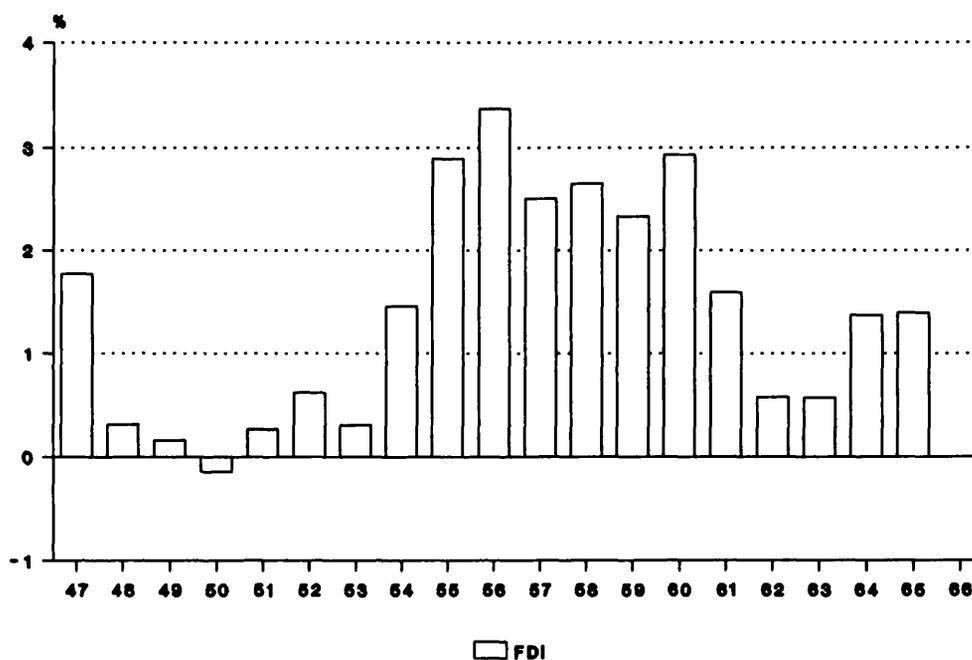
Source: Table VI.13.

If foreign direct investment did not contribute significantly to the total allocation of resources during this period, it had, nevertheless, a strategic place in Brazil's development process. For, it created a dynamic sector of consumer durables which stimulated domestic or indigenous entrepreneurs to invest in complementary activities.

National firms certainly had little access to investment funds in the quantities required by the proposed industrial projects. Finance was mainly provided by the banking system at short-term maturities (30, 60 and 90 days) and, to a much smaller

extent, by finance companies at medium-term maturities (see Table VI.8.1). Therefore, firms who had no access to the long-term funds provided by Banco do Brasil, had to self-finance their accumulation. At the macroeconomic level, this means that the firms had to borrow short in the hope to be able to repay their debt with the cash-flows of subsequent production periods. This mechanism of self-finance requires that the firms maintain high levels of mark-up and be capable of increasing them at periods of expansion. Indeed this is what Table VI.12 indicates.

Table VI.12 shows that firms simultaneously experienced an increasing demand for external funds and a high level of retained profits, which suggests the following mechanism: (1) firms took recourse to banks' short-term lending for their investment finance; (2) because the exchange reform of 1957 provided complete protection against foreign competition for national firms in priority sectors, expanding firms had privileged access to an increasing internal market, therefore a strong mark-up position; (3) due to their high mark-up and the continuous increase of government investment financed by drawing credit on Banco do Brasil, firms could maintain high levels of profits which allowed them to repay their short-term debts.

VI.4.3. The role of foreign capital inflows in financing internal accumulation

Until the 1970s the banking system of the developed economies was very much inward-looking. This means that the sources of foreign finance to less developed countries were mainly limited to suppliers' credit, aid and foreign direct investment. For Brazil, which strove to industrialise, this lack of international finance meant that the foreign currency produced by its exports had to be carefully allocated to priority sectors. This explains Instruction 70 and other measures taken by the government during the period.

How can one analyse the contribution of external finance to the financing of Brazil's economic development in the period? Certainly the definition of "external saving" is not helpful, as it fails to distinguish what represents effective finance from other purely financial costs (see chapter V above). One way of overcoming the analytical difficulty is to redefine the balance of payments so as to distinguish what represents real resources transfer (RRT) from other factors affecting international

capital inflows. The RRT comprises approximately the trade (X-M) and non-factor payments (NF). RRT is financed by capital inflows (CI) minus what we call costs of capital (CC) - that is, interest payments (i), amortisation (a) and profit remittances (π) - and changes of international reserves (Res). Finally, capital inflows encompass transfers (T), foreign direct investment (FDI) and loans (L). So we have:

$$RRT = (X-M) + NF = CI - CC - Res \qquad (1)$$
$$CI = T + FDI + L \qquad (2)$$
$$CC = i + a + \pi \qquad (3)$$

This classification permits the analyst to distinguish, in a time-series of the balance-of-payment, the purely financial causes of an increase of external debt from a gap between internal supply and demand. A summary of these variables for the period 1947 to 1966 can be found in Table VI.13. This indicates that the period was indeed characterised by the need to finance a real resources transfer and that this was closely associated with the pace of accumulation. Further, it can be seen that with the Targets Plan (1956-61) accumulation did increase the need for external finance. However, even in this period, the ratio RRT/GNP never exceeded 3.0%. Comparing the latter figure with the rate of accumulation (investment/gnp) of over 18%, one sees that rapid industrialisation required relatively little use of external resources.

Furthermore, in the period 1956-61, the financing of the real resources transfer represented on average 20% of the total capital inflows (see RRT/CI in Table VI.13) whereas the costs of capital absorbed 80% of these inflows (CC/CI). This indicates that whenever part of internal accumulation is financed by short-term external funds, the external debt rapidly becomes dysfunctional to economic development. Indeed, one of the causes of the recession of the 1960s was the pressure exercised by the IMF in order that Brazil increased its exports to repay its debt. The development strategy of the 1950s was an inward-looking rather than outward-looking type. Therefore, when the need to expand exports emerged, the government had little room for manoeuvre except to cut imports which were essential to Brazil's growth.

VI.4.4. Financial robustness

Financial fragility should be measured by indicators of the firms' levels of indebtedness and their capacity to repay the services of their outstanding deficit. This, as Taylor and O'Connel (1985) pointed out, is in itself a difficult task, as it implies the availability of precise firms' balance-sheet data and some subjective forecasting of firms' capacity to generate cash-flows in the future in order to repay their debts.

In our case, the lack of firms' balance-sheet data of Brazilian firms in the 1950s makes the analysis of systemic financial fragility very limited. However, a measure of this fragility can be obtained by using a ratio (DEF) of the total value of notes on which the borrowers defaulted over the total value of the loans provided by the banking system to the private sector. This measure has at least two more shortcomings: first, the data on notes defaulted are limited to Rio de Janeiro and São Paulo; second, part of the loans corresponds to consumer credit. These shortcomings are mitigated by the facts that (a) those two states produced more than 75% of the total GNP; and (b) only a small fraction of the above-mentioned loans was given by finance companies to consumers (see Table VI.8.2 for data on the participation of loans of finance companies on the total loans to the private sector).

Notwithstanding the shortcomings of the measure DEF, Figure VI.8 indicates that rapid accumulation in the period did not increase financial fragility. In fact, it is exactly when the economy shows signs of slow-down (in the beginning of the 1960s) that DEF declines and it is only after 1964 that it rises very rapidly. The reason for this behaviour is related to the financing mechanisms of the period: first, as firms saw a reduction of their cash-flows, they increased their mark-ups in order to pay their debts and to enlarge their liquidity (see Table VI.12); second, the rise of inflation caused the real financial services to decline in real terms because of the ceiling on the rate of interest. This partly explains the negative correlation between inflation and DEF from 1960 to 1964. Finally, Figure 8 shows that only in 1964, when the government deepened the recession by simultaneously tightening credit control and squeezing the purchasing power of the urban population, did financial fragility rise significantly.

To sum up, the compensating structures which permitted Brazil's economy to

139

Figure VI.8 - A measure of financial fragility: total value of notes defaulted in Rio de Janeiro and São Paulo over loans from the banking system and finance companies to the private sector
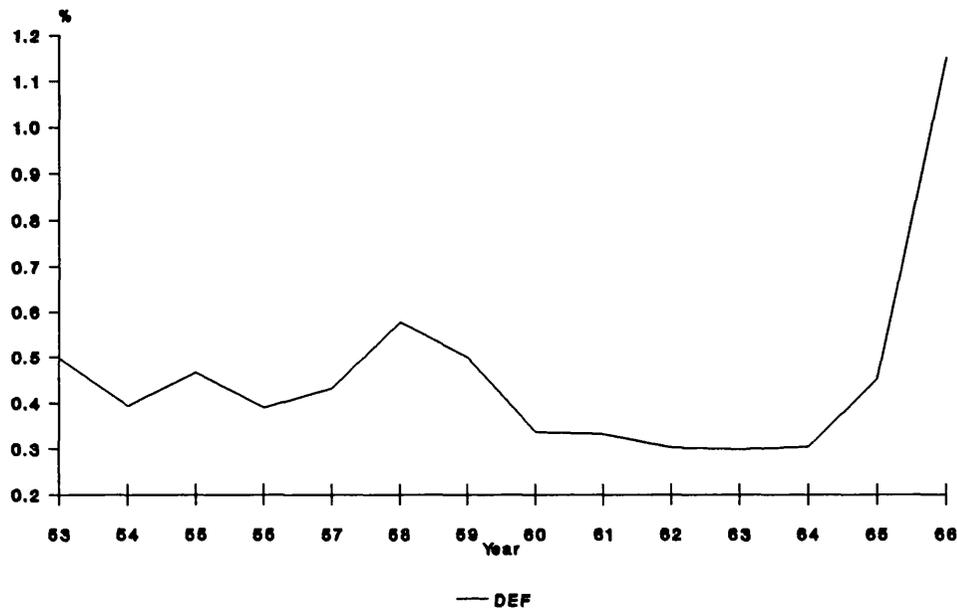
grow rapidly in the 1950s also significantly reduced the risks of financial instability. What they could not avoid was the increasing gap between financial and economic development, which accounts for much of the constraints on further economic development in the 1960s. This is the topic of the next sub-section.

VI.4.5. Limits on the functionality of the financial system

The financial arrangement that allowed the extraordinary growth in the period 1947-61 can be described by the following diagram:

Figure VI.9 - The main mechanisms to finance investment in Brazil in the 1950s
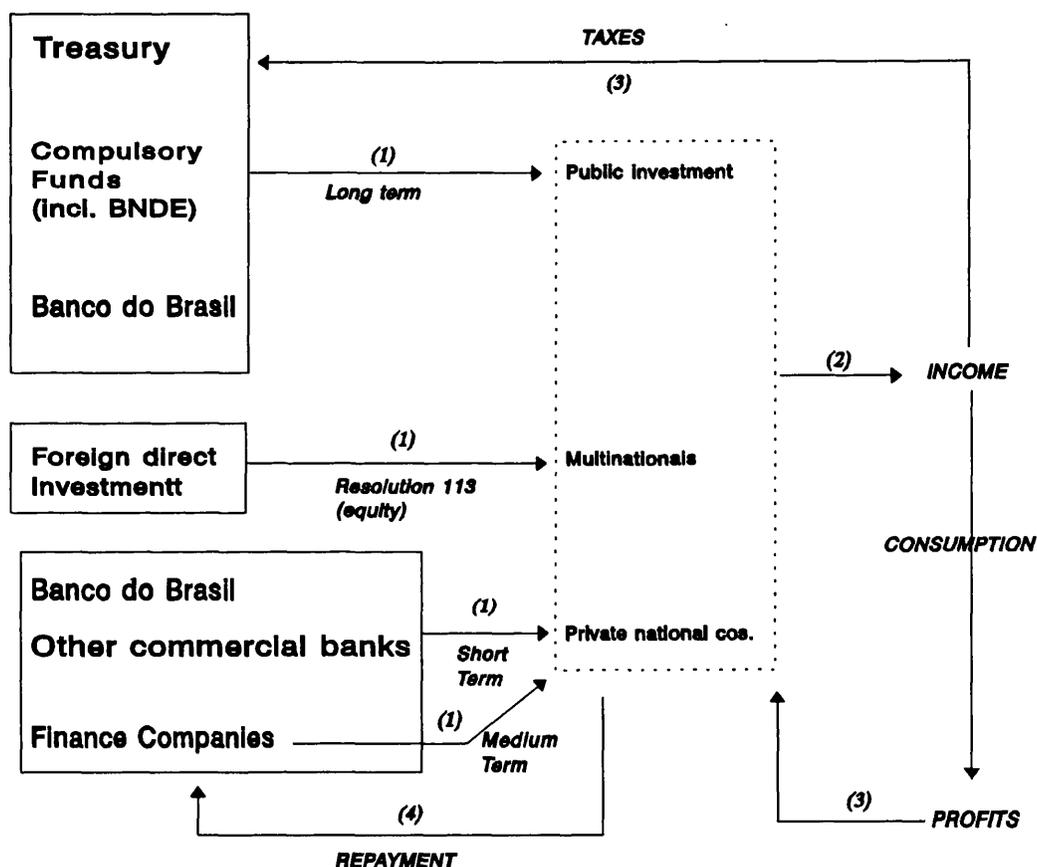
Observation: short-term credit = 30, 60 and 90 days; medium-term credit = up to 1 year; long-term credit= 1 year or more.

The numbers in brackets indicate the causal chain in the process of investment finance. This process logically begins with investment being financed by transfers of public funds, foreign direct investment or (especially) short-term bank loans. This investment would produce a multiplier effect which provided the government with additional tax revenues and firms with additional profits. Because mechanisms to fund short-term debt did not exist in the period, the only way private firms could repay the short-term debt, to finance long-term projects was by increasing their mark-ups; this

is the role inflation played in the process of financing accumulation.

In the light of the diagram above, the functionality of this financial arrangement can be shown to depend on at least three conditions:

(1) continuous growth of effective demand, in order to guarantee that firms could increase their mark-ups and repay their past debts; if effective demand was not expanding, then part of the outstanding short-term debt of the corporate sector could not be repaid and the economy would rapidly become more financially fragile; the expansion of effective demand could come from either a rise of investment or a boost in the demand for consumer durables;

(2) relatively low levels of cost inflation, so that firms could keep their mark-ups and thus self-finance their investments; and

(3) the continuous refinancing of the external debt.[82]

Those conditions did not exist any more by the end of the 1950s. First, concerning investment, because Brazil's industrialisation took place in blocks of industrial investment, productive capacity expanded far ahead of contemporary demand.[83] Therefore it was unlikely that the private sector would venture to expand even further its productive capacity. In addition, although there was an increasing need for investment in basic infrastructure, public investment was running into problems due to the diminishing financing capacity of the public sector. As inflation rose, not only did it become more difficult to finance real expansions of public expenditure without a tax reform, but the political pressure on the government to reduce its deficit increased as well. With consumption of durables, the problem was located, as noted earlier, in the highly uneven income distribution and the lack of

---

[82] This is not a purely technical requirement, since, as we have seen, external finance was not such an important variable in the overall financing of internal accumulation. However, this was an important political factor, for once the stock of external debt becomes significant, if refinancing is not forthcoming repayments become conditional on a drain of internal real resources (that is, an inversion of the RRT). In the latter case, the limits on the capacity to expand exports rapidly enough may force the government to adopt stabilisation programmes which, following the recipe dictated by the orthodoxy of the international financial institutions, may reduce government investment, creating a reduction of overall demand which discourages private investment. This was indeed the case in 1961.

[83] As Tavares (1972) and Serra (1982) point out, productive capacity in many investment projects in the capital goods and consumer durables sectors was oversized. Serra (1982: 83) explains the three main reasons behind this phenomenon: the requirement of a minimum scale of production in the face of a limited market size, competition for market shares between transnational enterprises (leading to the creation of entry barriers); and the need to guarantee a future share of the market.

mechanisms for the provision of consumer credit.

The government's stabilisation plans in 1962 and 1964 actually contributed to the deepening of inflation and the financial difficulties of the corporate sector, for, as mentioned earlier, they did not attack the central problems behind the recession begun in 1962 - among which was the mismatch between the economic and the financial development.

VI.5. Conclusion

The financial mechanisms that supported the extraordinary capital accumulation in Brazil during the period 1947-61 can now be summarised. The underdevelopment of funding mechanisms and the uncertainty of the inflationary environment meant that private financial institutions could not and did not provide long-term finance to private enterprises. Foreign borrowing, which did play a role in the financing of investment of foreign enterprises, was also not very significant in quantitative terms.

The bulk of the finance was provided by a macroeconomic mechanisms which articulated the financing of public investment with the self-financing of private firms. This process causally began with the financing of government's investment, through an association of extra-budgetary taxation and monetary expansion. Private firms could count on short-term loans provided by the commercial banking system, finance corporations and even the incipient curb market for acceptances. However, such loans could only be repaid given the continued increase of nominal demand generated by the financing of government deficits and the high level of mark-up in the Brazilian industrial sector.

This mechanism could only be sustained if the government continued to finance its increasing expenditure and deficits by additional money creation, and if firms could keep their prices growing at a faster pace than their costs. With escalating inflation, however, it becomes difficult for firms to keep increasing their mark-ups and for the government to augment their expenditure without increasing taxation or taking recourse to bond-issuing. Without the stimulus of government expenditure and money-creation, the scheme breaks down and firms are forced to try to increase their

mark-up. This creates an inflationary pressure and enlarges the overall fragility of the financial system. This is one of the main features of the slow-down during the 1960s.

To sum up, the compensating structures created in the 1950s, in order to overcome the shortcomings of Brazil's financial structure, were significantly functional in providing the financial basis for industrialisation. However these had two weaknesses which proved unsurmountable: first, they were not capable to resist declines in effective demand without enforcing macroeconomic imbalances, especially inflation. Second, they did not provide the mechanisms to continue accumulation once this stage of industrialisation (of the import-substitution of durables sectors) was concluded. For this, the financial system would have to possess mechanisms to finance middle-term operations (such as industrial working capital and consumption of durables) and long-term operations (such as mortgages and, especially, investment of larger scales and maturities).

The gap between financial and economic development and the need for financial reform was widely perceived by economists in the 1960s, however when the time came for the military government to opt for a financial reform it took the "prior-saving argument" as its theoretical background. This, as will be demonstrated in the next chapters, had important and disastrous consequences for future financial and economic development in Brazil.

STATISTICAL APPENDIX TO CHAPTER VI

Table VI.1. Macroeconomic indicators of growth, inflation and the external sector (1947-83)

YEAR	GROWTH (annual real rate, %)				INFLATION (annual rate, %)		EXTERNAL SECTOR (%)			
	GNP	per capita GNP	Industry	Agriculture	GNP deflator (5)	WPI (1)	M/GNP(2)	X/GNP (2)	Debt/ GNP (2)	Debt/X
	(1)	(2)	(3)	(4)		(6)	(7)	(8)	(9)	(10)
1947-61	7.0	4.2	8.7	4.1	14.8	15.8	6.5	7.5	7.9	123.6
1962-66	5.0	1.0	4.9	4.4	82.5	81.9	4.5	5.4	15.7	291.8
1947	2.4	-	-	-	-	11.8	10.7	12.0	6.5	54.0
1948	9.6	7.0	11.3	6.9	5.9	7.0	8.1	10.6	5.3	50.5
1949	7.9	5.4	10.3	4.5	8.1	6.8	7.3	8.4	4.6	54.6
1950	6.6	4.1	11.3	1.5	9.2	11.5	6.1	8.9	3.7	41.1
1951	4.6	1.7	6.4	0.7	18.4	16.5	9.1	9.4	3.0	32.2
1952	7.6	4.5	5.0	13.0	9.3	11.8	7.7	6.4	2.9	45.1
1953	4.8	1.9	8.7	-3.3	13.8	14.5	4.6	6.3	4.7	75.3
1954	7.9	4.8	8.7	7.9	27.1	27.2	6.5	7.1	6.0	84.5
1955	8.5	5.4	10.6	7.7	11.8	16.3	5.7	7.3	7.5	101.8
1956	3.0	0.0	6.8	-2.4	22.6	19.9	4.9	7.0	12.6	181.7
1957	7.7	4.6	5.8	9.3	12.7	14.2	5.3	5.7	10.9	190.9
1958	10.7	7.5	16.2	2.0	12.4	13.0	4.9	5.1	12.7	246.7
1959	9.8	6.5	11.9	5.3	35.9	37.9	5.3	5.6	14.9	264.6
1960	9.4	6.2	9.6	4.9	25.4	29.1	5.2	5.1	15.7	307.6
1961	8.5	5.1	10.6	7.6	34.7	37.2	5.3	5.7	15.4	268.5
1962	6.7	3.5	7.8	5.5	50.1	51.9	5.3	5.0	16.4	331.3
1963	0.6	-2.5	0.2	1.0	78.4	73.7	4.5	4.8	13.7	283.5
1964	3.2	0.0	5.2	1.3	89.9	90.7	3.7	4.9	13.3	270.9
1965	2.9	-0.3	-4.7	13.8	58.2	57.1	3.4	5.8	17.2	298.1
1966	6.7	3.4	11.7	-3.2	37.9	38.5	4.5	6.1	18.1	298.4

Sources of Raw Data: cols. 1, 2, 3, 4, 6, 7, 8, 9 and 10: as in Table V.1. col. 5: IBGE, 1987, p. 111; col. 6: idem, pp. 189-193; cols. 7-8: idem, pp. 536-537; col. 9-10: idem, p. 543.
Abbreviations: X = imports; M = imports.

Table VI.2. Investment indicators

YEAR	TOTAL INVESTMENT [1]		PRIVATE INVESTMENT		GOVERNMENT INVESTMENT [3]	
	% of GNP	real growth[2], %	% of total investment	real growth[2] %	% of total investment	real growth[2], %
	(1)	(2)	(3)	(4)	(5)	(6)
47-61	15.4	9.5	73.4	6.7	26.6	12.0
62-66	17.4	6.6	65.5	15.0	34.5	12.6
1947	14.7	-	79.8	-	20.2	-
1948	12.6	-5.9	69.7	-17.8	30.3	41.1
1949	12.3	5.2	65.0	-1.8	35.0	21.4
1950	12.3	6.6	64.1	5.2	35.9	9.4
1951	14.8	26.1	75.3	47.9	24.7	-13.0
1952	15.2	10.0	78.2	14.3	21.8	-3.1
1953	14.6	0.7	76.2	-1.9	23.8	9.9
1954	16.7	23.3	76.6	23.9	23.4	21.3
1955	15.2	-0.9	77.9	0.8	22.1	-6.5
1956	14.4	-2.3	79.4	-0.5	20.6	-8.7
1957	17.4	29.5	73.4	19.8	26.6	67.0
1958	18.2	15.9	69.7	10.1	30.3	32.0
1959	20.6	24.2	74.8	33.3	25.2	3.3
1960	17.0	-9.5	66.8	-19.1	33.2	19.3
1961	15.1	-3.9	61.0	-12.1	39.0	12.8
1962	17.7	25.4	65.4	34.4	34.6	11.2
1963	18.0	2.6	70.0	9.7	30.0	-10.9
1964	16.9	-3.6	70.2	-3.2	29.8	-4.3
1965	18.4	12.4	68.4	9.5	31.6	19.4
1966	18.4	6.8	58.0	11.9	42.0	41.9

Sources of Raw Data: as in table V.1; Observations: [1] total investment includes changes in inventories; [2] from 1947 to 1969 real total investment was obtained by deflating nominal valued by GNP implicit deflator (from table VI.1, col. 5); data for 1970-83 obtained from IBGE, p.126; [3] includes investment of government-owned enterprises; [4] simple average of the period.

Table VI.3. Sectoral distribution of GNP

	Agriculture	Industry	Commerce
1947	27.6	19.9	19.4
1955	25.1	24.4	16.3
1964	21.5	25.7	13.8

Source: Goldsmith, 1986: 225.

Table VI.4. Money: real yearly growth rate of the monetary base, M1 and M2 (deflated by the general price index, IGP-DI) %.

Year	Quarter	Monetary Base	M1	M2
1961	1	9.5	11.0	12.0
	2	0.6	1.6	2.3
	3	1.9	1.3	0.8
	4	-3.1	-0.4	-2.1
1962	1	-11.0	-7.6	-9.4
	2	0.3	0.5	-1.8
	3	7.4	7.8	5.8
	4	15.7	12.7	10.3
1963	1	1.1	-6.2	-7.9
	2	-3.0	-10.7	-11.9
	3	-4.9	-14.5	-15.4
	4	-3.7	-10.1	-10.3
1964	1	5.3	-0.1	-0.8
	2	8.6	7.6	6.9
	3	2.2	6.3	5.6
	4	-8.0	-1.4	-1.6
1965	1	-4.6	7.3	7.0
	2	3.0	14.8	14.4
	3	12.4	27.1	26.6
	4	28.4	36.6	36.3
1966	1	17.9	17.8	16.4
	2	3.4	-0.3	-1.0
	3	-8.4	-15.5	-15.7
	4	-11.2	-19.6	-19.4

Source of Data: IBGE, 1987, pp. 503-4.

Table VI.5. Some indicators of the stock markets in the 1950s/1960s

YEAR	Issues by new companies	Issues by existing companies		index of (2)[2] 1950=100	(2) as % of total investment	Assets transacted in stock markets (%)			Rate of growth of the Share index[2],[3]	Share turn-over
		Subscription in cash	Other[1]			Shares	Bills of Exchange	Public Bonds		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1950	19.3	48.3	32.4	100.0	6.34	...	...	...	16.9	0.11
1951	18.2	42.9	38.9	176.6	9.11	...	...	...	-7.8	0.13
1952	13.5	49.5	37.0	263.8	12.75	...	...	...	-13.3	0.10
1953	15.7	46.7	37.6	226.1	10.99	...	...	...	-13.3	0.23
1954	25.8	40.7	33.5	267.5	10.33	...	...	...	-14.4	0.12
1955	16.6	46.0	37.4	279.7	11.67	54.0	...	46.0	-9.1	0.07
1956	6.8	26.6	66.5	363.1	15.42	68.8	...	31.2	6.7	0.08
1957	10.8	50.8	38.4	433.2	14.44	54.9	...	45.1	-2.5	0.07
1958	13.5	66.3	20.2	455.9	13.35	51.1	...	48.9	18.3	0.11
1959	8.1	55.8	36.1	570.5	13.68	49.7	...	50.3	28.5	0.16
1960	15.2	50.0	34.8	460.6	13.22	60.0	17.5	22.5	10.4	0.12
1961	8.4	43.2	48.4	354.2	11.01	29.8	60.7	9.4	-2.7	0.14
1962	10.1	51.5	38.4	534.8	13.32	31.3	63.2	5.5	102.3	0.25
1963	7.0	42.8	50.2	420.6	10.04	45.7	50.5	3.8	-36.8	0.41
1964	3.4	16.5	80.1	361.1	8.54	22.9	74.4	2.7	-41.2	0.28
1965	0.2	18.3	81.5	707.5	14.43	24.0	69.3	6.8	...	...
1966	2.0	27.3	70.7	737.4	14.38	17.7	72.7	9.6	-13.3	...

Source of data: cols.1 to 5: *Anuarios APEC*, 1970, table D-1; cols. 6 to 10: Goldsmith, 1986, p.275; Observations: (1) includes incorporation of reserves, asset revaluations, fiscal incentives and other operations; (2) deflated by general price index as in table VI.1; (3) Rio de Janeiro stock exchange (index = IBV-RJ).

Table VI.6. Asset, loan rates and rate spreads (%)

	Asset rates[1]										Loan rates[1]				Rate Spreads[2]	
	Discount rates		Time deposits Banks		Govt. bonds		Bills of Exchange		Savings deposits (CEF)		Bank loan rates Working capital		Finance Co. Working capital		Banks	Finance cos.
Year	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	(9)
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real		
1947	6.0		...	...	...	...	n.a.	n.a.	n.a.	n.a.	...	...	n.a.	n.a.	...	...
1948	6.0	-0.9	...	...	...	...	n.a.	n.a.	n.a.	n.a.	...	...	n.a.	n.a.	...	...
1949	6.0	-0.8	...	...	...	...	n.a.	n.a.	n.a.	n.a.	...	...	n.a.	n.a.	...	...
1950	6.0	-5.0	...	...	7.3	-3.8	n.a.	n.a.	n.a.	n.a.	...	...	n.a.	n.a.	...	...
1951	6.0	-9.0	4.7	-10.1	...	...	n.a.	n.a.	n.a.	n.a.	14.3	-1.9	n.a.	n.a.	168.4	...
1952	6.0	-5.2	4.4	-6.6	...	...	n.a.	n.a.	n.a.	n.a.	14.1	2.0	n.a.	n.a.	179.6	...
1953	6.0	-7.4	4.7	-8.6	...	...	n.a.	n.a.	n.a.	n.a.	13.0	-1.3	n.a.	n.a.	145.6	...
1954	6.0	-16.7	4.9	-17.5	...	...	n.a.	n.a.	n.a.	n.a.	13.0	-11.2	n.a.	n.a.	137.3	...
1955	6.0	-8.9	4.4	-10.3	...	...	n.a.	n.a.	n.a.	n.a.	13.8	-2.2	n.a.	n.a.	174.1	...
1956	6.0	-11.6	4.2	-13.1	...	...	n.a.	n.a.	n.a.	n.a.	14.5	-4.5	n.a.	n.a.	198.1	...
1957	6.0	-7.2	4.2	-8.7	...	...	n.a.	n.a.	...	...	15.1	0.8	n.a.	n.a.	209.6	...
1958	6.0	-6.2	4.7	-7.4	...	...	n.a.	n.a.	...	...	16.0	2.6	n.a.	n.a.	198.2	...
1959	6.0	-23.1	4.0	-24.6	...	...	n.a.	n.a.	...	...	17.5	-14.8	n.a.	n.a.	270.0	...
1960	8.0	-16.4	4.0	-19.5	6.4	-17.6	21.0	-11.8	...	...	18.6	-8.2	42.0	10.0	292.0	95.5
1961	8.0	-21.3	4.0	-24.2	...	...	26.3	-5.6	...	...	19.6	-12.8	52.0	10.8	312.0	94.1
1962	8.0	-28.9	3.8	-31.6	...	...	29.5	-11.1	...	...	22.3	-19.5	60.0	5.4	385.4	100.0
1963	8.0	-37.8	3.6	-40.4	...	...	35.0	-17.2	...	...	25.1	-28.0	70.6	-1.8	467.4	98.9
1964	8.0	-43.4	3.4	-45.8	...	...	43.9	-28.7	67.7	-12.1	30.5	-31.6	81.2	-5.0	615.9	83.1
1965	10.0	-30.0	2.0	-35.1	69.0	7.6	36.0	-13.4	43.6	-8.6	33.3	-15.1	79.0	14.0	1043.3	116.2
1966	12.0	-19.1	1.9	-26.4	45.2	4.9	30.4	-5.8	42.1	2.7	34.7	-2.7	71.5	23.9	1131.0	130.9

Sources: col. 1: Goldsmith, 1986, p. 278; col. 2: Christoffersen, 1968, p.5; col 3: Goldsmith, op. cit., p. 278; col. 4: Syrup, 1972, p. 130; col. 5: Brazil's Central Bank Bulletin, 13(3), March 1977, pp. 96-7; col. 6: Christoffersen, op. cit., pp. 21-23 (1951-60) and p. 7 (1960-66); col. 7: idem, p. 5.

Observations: (1) real rates deflated by the general price index (IGP-DI) as in Table VI.1; (2) rate spread (r) obtained as follows: $r = ((1+r_l)/(1+r_d))-1$ where r_l stands for the loan rate and r_d for the deposit rate.

Table VI.7.1. Financial assets: 1967 cruzeiros and growth rates

Year	Monetary Assets (MA)[1]				Non-Monetary Assets (NMA)[1]			Total Assets (FA)[1]
	Currency	Demand deposits		Total MA	Time Deposits	Government bonds	TOTAL NMA	
		Banco do Brasil	Other[2]					
Average yearly growth rates (%)								
1947-55	2.3	0.3	8.9	5.7	-5.0	-11.3	-7.6	2.6
1956-61	3.8	21.8	7.6	8.0	-11.2	18.2	4.6	7.6
1962-66	-4.9	-1.4	-4.6	-4.2	-5.3	-46.6	24.9	-0.7
In constant 1967 cruzeiros								
1947	2530.5	778.6	3174.4	6483.5	1587.2	1467.4	3054.6	9538.1
1948	2476.9	839.6	3204.6	6521.1	1525.3	1385.4	2910.7	9431.8
1949	2541.6	904.0	3733.8	7179.4	1676.9	1310.1	2987.0	10166.4
1950	2960.0	704.8	4792.4	8457.1	1679.7	1186.3	2866.0	11323.2
1951	2864.0	776.5	6171.6	9812.1	1643.8	1048.8	2692.5	12504.6
1952	2840.5	856.7	6393.3	10090.5	1469.8	946.8	2416.7	12507.1
1953	2984.6	850.5	6630.8	10465.9	1378.1	826.9	2205.0	12670.9
1954	3033.7	885.3	6172.7	10091.7	1250.6	650.1	1900.7	11992.4
1955	3038.8	798.3	6274.5	10111.6	1053.7	564.1	1617.9	11729.5
1956	2995.6	798.8	6395.0	10189.4	940.8	470.4	1411.2	11600.6
1957	3155.9	983.3	7543.9	11683.2	952.2	415.9	1368.1	13051.3
1958	3427.7	1065.8	8182.6	12676.1	914.5	381.6	1296.1	13972.2
1959	3170.5	1112.2	8563.4	12846.1	720.7	276.8	1022.4	13868.5
1960	3269.6	1415.6	8974.4	13659.6	637.3	459.6	1216.7	14876.3
1961	3602.9	2139.2	9238.1	14980.3	519.3	1086.5	1769.1	16749.4

Source: From 1947 to 1972: Banco Central do Brasil, Monthly Bulletin, 10(1), January 1974, pp. 4-11; from 1973 to 1979: idem, 16(11), November 1980, pp. 82-3; from 1980 to 1983: idem, 20(2), February 1984, pp. 74-77.

Observation: (1) deflated by the general price index as in Table VI.1. (IGP-DI); (2) include all other commercial banks and federal and state savings banks.

Table VI.7.2. Financial assets: percentage of total assets and of the GNP (%)

	Monetary assets				Non-monetary assets				Assets as a percentage of GNP		
Year	Currency	Demand deposits		TOTAL	Time Deposits	Passbook savings	Bills of Exchange	Government bonds	TOTAL	MA	NMA	Total
		Banco do Brasil	Other[1]									
1947	26.5	8.2	33.3	68.0	16.6	n.a.	n.a.	15.4	32.0	24.7	12.5	37.2
1948	26.3	8.9	34.0	69.1	16.2	n.a.	n.a.	14.7	30.9	20.9	9.8	30.7
1949	25.0	8.9	36.7	70.6	16.5	n.a.	n.a.	12.9	29.4	19.3	8.6	27.9
1950	26.1	6.2	42.3	74.7	14.8	n.a.	n.a.	10.5	25.3	19.5	8.1	27.6
1951	22.9	6.2	49.4	78.5	13.1	n.a.	n.a.	8.4	21.5	20.6	7.0	27.6
1952	22.7	6.8	51.1	80.7	11.8	n.a.	n.a.	7.6	19.3	23.7	6.5	30.2
1953	23.6	6.7	52.3	82.6	10.9	n.a.	n.a.	6.5	17.4	22.9	5.5	28.3
1954	25.3	7.4	51.5	84.2	10.4	n.a.	n.a.	5.4	15.8	19.8	4.2	24.0
1955	25.9	6.8	53.5	86.2	9.0	n.a.	n.a.	4.8	13.8	20.0	3.8	23.8
1956	25.8	6.9	55.1	87.8	8.1	n.a.	n.a.	4.1	12.2	18.5	3.0	21.4
1957	24.2	7.5	57.8	89.5	7.3	n.a.	n.a.	3.2	10.5	18.4	2.5	20.9
1958	24.5	7.6	58.6	90.7	6.5	n.a.	n.a.	2.7	9.3	19.3	2.3	21.6
1959	22.9	8.0	61.7	92.6	5.2	n.a.	0.2	2.0	7.4	15.9	1.6	17.5
1960	22.0	9.5	60.3	91.8	4.3	n.a.	0.8	3.1	8.2	16.2	1.3	17.5
1961	21.5	12.8	55.2	89.4	3.1	n.a.	1.0	6.5	10.6	15.2	1.4	16.6

Source: Table VI.71.1.
Observations: (1) include all other commercial banks and federal and state savings banks

152

Table VI.8.1. Loans to the household and corporate sectors (including public enterprises): 1959 cruzeiros and growth rates

| | In 1959 million cruzeiros | | | | | | | | | | Yearly growth rates (%) | | | | |
| Year | Banking System | | | Non-Banking System | | | | | | TOTAL | Banking System | | | Non-Banking System | Total |
	Banco do Brasil	Other Commercial Banks	Total	Finance Cos.	BNH	Savings Banks	BNDE	BNCC	Total		Banco do Brasil	Other Comm. Banks	Total		
1951	99.9	246.3	346.2	n.a.	n.a.	36.4	...	0.8	73.7	419.9	n.a.	n.a.	n.a.	n.a.	n.a.
1952	124.0	245.5	369.6	n.a.	n.a.	40.0	...	0.6	40.6	410.2	24.2	-0.3	6.8	-44.9	-2.3
1953	127.6	252.6	380.2	n.a.	n.a.	41.6	...	0.6	42.2	422.4	2.9	2.9	2.9	3.8	3.0
1954	142.5	235.4	377.9	n.a.	n.a.	39.5	...	0.6	40.1	417.9	11.7	-6.8	-0.6	-5.0	-1.1
1955	138.7	227.1	365.8	n.a.	n.a.	42.2	7.1	0.6	59.4	425.2	-2.7	-3.5	-3.2	48.2	1.7
1956	133.7	231.9	365.5	n.a.	n.a.	42.5	10.3	0.5	66.7	432.2	-3.7	2.1	-0.1	12.3	1.7
1957	143.1	253.6	396.7	n.a.	n.a.	44.2	17.0	1.2	82.4	479.0	7.1	9.4	8.5	23.5	10.8
1958	159.9	269.5	429.5	n.a.	n.a.	46.1	22.9	1.1	95.9	525.4	11.8	6.3	8.3	16.5	9.7
1959	134.4	266.5	400.9	1.0	n.a.	38.9	28.6	1.3	100.8	501.7	-16.0	-1.1	-6.7	5.1	-4.5
1960	141.4	296.1	437.6	4.8	n.a.	36.7	32.5	1.1	109.4	546.9	5.2	11.1	9.1	8.5	9.0
1961	157.9	283.1	441.0	6.6	n.a.	35.0	30.2	0.9	104.5	545.5	11.6	-4.4	0.8	-4.5	-0.3
1962	178.2	288.0	466.2	16.4	n.a.	34.3	31.7	0.7	120.5	586.7	12.9	1.7	5.7	15.3	7.6
1963	157.2	258.8	416.0	15.6	n.a.	27.7	29.3	0.5	103.7	519.7	-11.8	-10.1	-10.8	-14.0	-11.4
1964	143.4	249.9	393.2	25.8	n.a.	21.8	21.2	0.7	93.4	486.6	-8.8	-3.5	-5.5	-9.9	-6.4
1965	113.0	281.2	394.2	51.0	1.4	25.9	17.6	1.1	119.9	514.1	-21.2	12.6	0.3	28.3	5.6
1966	128.0	252.4	380.4	54.0	3.8	31.7	15.8	1.2	131.6	511.9	13.3	-10.2	-3.5	9.7	-0.4

Sources: Brazil's Central Bank Bulletin, 10(1), January 1974; Finance Companies from 1959-63: Brazil's Central Bank Bulletin, 10(1), January 1974; Conjuntura Econômica, December 1972, p. 56.

153

Table VI.8.2. Loans to the household and corporate sectors (including public enterprises): participation of each lending institutions and of loans to GNP

Year	Percent of total loans											Percentage of GNP		
	Banking System			Non-Banking System								Banking System	Non-Banking System	TOTAL
	Banco do Brasil	Other Comm. Banks	Total	Financ e Cos.	BNH		Savings Banks		BNDE	BNCC	Total			
							Federal (CEF)	State (CEE)						
1951	23.8	58.7	82.4	0.0	0.0	8.7	7.3	1.4	0.0	0.2	17.6	24.5	5.0	29.6
1952	30.2	59.9	90.1	0.0	0.0	9.7	7.5	2.2	0.0	0.2	9.9	24.9	2.4	27.3
1953	30.2	59.8	90.0	0.0	0.0	9.8	7.5	2.3	0.0	0.1	10.0	24.6	2.0	26.6
1954	34.1	56.3	90.4	0.0	0.0	9.5	7.0	2.5	0.0	0.1	9.6	22.7	1.4	24.1
1955	32.6	53.4	86.0	0.0	0.0	9.9	7.4	2.5	1.7	0.1	14.0	21.0	1.7	22.8
1956	30.9	53.6	84.6	0.0	0.0	9.8	7.3	2.5	2.4	0.1	15.4	20.0	1.5	21.5
1957	29.9	52.9	82.8	0.0	0.0	9.2	6.8	2.4	3.6	0.3	17.2	20.4	1.4	21.7
1958	30.4	51.3	81.7	0.0	0.0	8.8	6.6	2.2	4.3	0.2	18.3	20.0	1.2	21.2
1959	26.8	53.1	79.9	0.2	0.0	7.8	5.5	2.3	5.7	0.3	20.1	17.3	0.9	18.1
1960	25.9	54.1	80.0	0.9	0.0	6.7	4.6	2.1	5.9	0.2	20.0	17.8	0.6	18.4
1961	28.9	51.9	80.8	1.2	0.0	6.4	4.0	2.4	5.5	0.2	19.2	16.8	0.4	17.2
1962	30.4	49.1	79.5	2.8	0.0	5.8	3.7	2.2	5.4	0.1	20.5	16.8	0.3	17.1
1963	30.3	49.8	80.0	3.0	0.0	5.3	3.5	1.8	5.6	0.1	20.0	14.5	0.1	14.7
1964	29.5	51.3	80.8	5.3	0.0	4.5	2.7	1.8	4.3	0.2	19.2	13.4	0.1	13.4
1965	22.0	54.7	76.7	9.9	0.3	5.0	2.9	2.1	3.4	0.2	23.3	12.9	0.1	13.0
1966	25.0	49.3	74.3	10.6	0.7	6.2	4.0	2.2	3.1	0.2	25.7	11.7	0.0	11.8

Sources: as in Table VI.8.1.

Table VI.9. Some indicators of government deficit and its financing

| Year | In 1959 million cruzeiros | | | Financing (%) | | | (3) as % of GNP |

Year	Total Revenues	Total Expenditures	Surplus/ Deficit	Monetary Authorities		Public debt	
				Banco do Brasil	Other		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950	108.6	125.3	-16.7	84.4	0.0	15.6	1.1
1951	136.3	125.1	11.2	108.3	0.0	-8.3	-0.7
1952	134.2	124.0	10.2	84.0	0.0	16.0	-0.6
1953	131.1	165.4	-34.3	-91.6	0.0	191.6	2.2
1954	138.6	149.6	-11.0	-162.5	0.0	262.5	0.6
1955	136.0	149.1	-13.1	100.0	0.0	0.0	0.7
1956	149.9	198.0	-48.1	99.2	0.0	0.8	2.3
1957	172.5	245.9	-73.3	100.0	0.0	0.0	3.3
1958	169.9	209.6	-39.6	69.4	0.0	30.6	2.0
1959	180.9	221.4	-40.5	78.0	0.0	22.0	1.7
1960	180.3	236.1	-55.8	90.6	0.0	9.4	2.4
1961	178.1	244.1	-66.0	98.9	0.0	1.1	3.0
1962	156.2	233.8	-77.6	87.9	0.0	12.1	3.8
1963	152.2	225.3	-73.1	84.5	0.0	15.5	3.8
1964	196.3	263.4	-67.1	101.1	0.0	-1.1	2.8
1965	260.1	299.6	-39.5	-52.2	-3.5	155.7	1.4
1966	306.0	336.4	-30.4	5.9	-38.4	132.5	0.9
1947-55				13.6	0.0	53.0	1.5
1956-61				89.3	0.0	10.7	1.1
1962-64				45.4	-8.4	62.9	0.5

Source of raw data: Brazil's Central Bank, August 1971, pp. 51-2.

155

Table VI.10. Funds created by the Federal Government to finance its own investment projects: in cruzeiros billion and percent

	1959	1960	1961	1962
Treasury funds	12.89	16.86	23.33	28.53
Fundo Aeronautico	0.07	0.07	0.05	0.47
Fundo de Reaparalhamento Economico	7.16	9.92	14.24	20.14
Fundo Especial de Valorizacao da Amazonia	3.06	4.21	5.91	...
Fundo Federal de Eletrificacao	0.59	0.68	0.77	2.51
Fundo de Valorizacao da Fronteira do Sudoeste	0.50	0.55	0.55	...
Fundo da Marinha Mercante	1.50	1.43	1.81	5.40
Special Funds	50.44	65.29	106.33	157.93
Fundo Rodoviario Nacional	19.20	23.10	44.90	59.10
Fundo da Marinha Mercante	3.40	4.00	5.60	9.40
Fundo Portuario Nacional[a]	27.84	38.19	55.83	89.43
Other special funds	10.00	13.56	23.87	15.77
Funds administered by BNDE	10.00	13.56	23.87	15.77
Total	73.32	95.70	153.54	202.23
% of the Total Public Investments[b]	61.04	53.27	56.24	44.38

Source: MiniPlan, EPEA, 1965, pp. 47-57.
Observations: (a) estimated according to the information provided by the above-cited document, p. 52; (b) public investment from Werneck, 1969, p. 99.

Table VI.11. Banco do Brasil's loans to the public sector (as percentage of its total loans)

Year	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
%	52.9	47.2	48.9	47.6	49.1	54.0	58.0	55.8	58.7	61.5	65.6

Source: *Conjuntura Econômica*, February 1969, p. 82.

Table VI.12. Flow of Funds of Commerce and Industry: External (A) and Internal Funds (B) as percentage of Total Funds and Retained Profits (C) as percentage of Total Profit

Year	Industry			Commerce		
	A	B	C	A	B	C
1952			65			77.4
1953	56.3	43.7	69	51.5	48.5	61.7
1954	69.4	30.6	69.5	83.6	16.4	67.9
1955	43.9	56.1	71.8	28.1	71.9	67.8
1956	88.5	11.5	70.3	96.0	4.0	64.7
1957	75.7	24.3	69.7	100.3	-0.3	69.2
1958	70.0	30.0	76.5	67.1	32.9	76.7
1959	63.6	36.4	75.6	76.7	23.3	70.7
1960	63.4	36.6	75.2	74.7	25.3	68.5
1961	65.9	34.1	74.4	73.5	26.5	72.7
1962	64.1	35.9	82.5	77.1	22.9	76.3
1963	60.8	39.2	85.7	74.1	25.9	83.8
1964	47.3	52.7	90.1	64.9	35.1	87.8
1965	47.4	52.6	84.4	61.5	38.5	86.2
1966	48.8	51.2	81.1	64.5	35.5	74.6

Source: Sochaczweski (1979), p. 65.

Table VI.13 - Some indicators of the use of external funds to finance internal accumulation

Average values in US$ billion

	1948-55	1956-61	1962-66
CURRENT ACCOUNT	-0.21	-0.55	-0.37
1. REAL RESOURCES TRANSFERS (RRT)	-0.05	-0.13	0.10
1.1. TRADE BALANCE	0.19	0.13	0.29
Imports	-1.23	-1.22	-1.19
Exports	1.42	1.35	1.48
1.2. NON-FACTORS- SERVICES(NFT)[1]	-0.26	-0.26	-0.19
2. COST OF CAPITAL (CC)	-0.16	-0.43	-0.47
Interest	-0.03	-0.09	-0.13
Amortisation	-0.08	-0.31	-0.32
Profits & Dividends	-0.05	-0.03	-0.02
3. NET CAPITAL INFLOWS (CI)	0.15	0.52	0.47
Transfers	-0.01	0.00	0.06
Net FDI	0.01	0.11	0.05
MLT loans	0.05	0.38	0.33
ST loans	-0.02	0.00	0.00
Other	0.11	0.03	0.02
4. SUPERAVIT/DEFICIT	-0.06	-0.03	0.10
5. CHANGES IN RESERVES (Res)	0.06	0.03	-0.10
Some indexes (%)			
RRT/GNP	0.92	2.71	-1.74
CC/GNP	6.58	10.53	9.38
FDI/INV	0.59	2.78	1.10
Res/GNP	-2.36	-0.22	2.01
CI/GNP	5.14	13.01	9.65
External Debt/GNP	4.72	13.70	15.74
RRT/CI	0.02	0.20	-0.32
CC/CI	1.57	0.86	1.04
Res/CI	-0.59	-0.06	0.28

Source of data: IBGE, 1985, pp. 536-38; External debt from idem, p. 543; Observations: INV = total investment; GNP = gross national product;dollar values deflated by implicit exchange rate as in IBGE (1985).

VII. THE FINANCIAL REFORM AND THE ECONOMIC 'MIRACLE'

VII.1. Introduction

In the previous chapter it was shown that, before 1964, financial development lagged behind the rapid progress made by the productive sectors. This created constraints on the country's development, which required appropriate medium and long-term financing mechanism. In other words, a new articulation between the financial and the productive spheres was needed.

In 1964 a military coup brought to power a group of neo-classical economists who believed that this partnership between the financial and productive spheres had to be based on the stimulus of individual saving. From 1964 to 1966, this group implemented a series of reforms of the financial system. One of the basic guidelines of these reforms, according to an official government document, was 'to guarantee higher interest rates for savers and lower rates for borrowers and all investors' (MiniPlan, 1964: 21). The reformers blamed the usury law and inflation for the negative rates of interest paid to savers; and the lack of competition and inefficiency of the financial structure for the increasing gap between deposit and loan rates. The solution for the problem was three-fold. Firstly, in order to reduce inflation the government introduced a severe stabilisation programme, which has already been described in chapter VI above. Secondly, the government indexed its bonds and loans, and determined that private financial institutions did the same with theirs. Finally, to increase the competition and efficiency of the financial system, the reform promoted a segmentation of its structure according to the maturity of assets and loans; and facilitated the access of firms to foreign indebtedness.

This chapter analyses the logic behind the financial reform (section VII.2). Further it shows how the reformed system deviated from what was expected by the reformers (section VII.3) and how such structure contributed to the economic boom from 1967 to 1973 (section VII.4). Finally it explains how the reform failed to create a financial structure functional for development, indicates the reason for such failure

159

and points out the consequences of such failure for the future economic and financial development of the country (section VII.5). Section VII.6 summarises the findings and presents the conclusions of the chapter.

VII.2. The financial reform

The financial reform was implemented by a series of laws decreed by the newly established military *junta* in the period 1964-66. They were:

(1) Law 4357 of 16 July 1964 - introduced indexation, initially through Treasury indexed bonds but soon also housing contracts and savings account;

(2) Law 4595 of 31 December 1964 - created the National Monetary Council (CMN) and the Central Bank of Brazil. Law 4595 restructured the relationship between the Treasury, Banco do Brasil (which lost its functions as the monetary authority) and the forerunner of the central bank (SUMOC);

(3) Law 4728 of 14 July 1965 - reformed the capital market by creating new financial institutions (for instance, investment banks);

(4) Law 4380 of 21 August 1964 - created a specialised housing finance system, with the National Housing Bank (BNH) as the central bank for a network of savings and loans societies;

(5) Law 4829 of 5 November 1965 - instituted the National Agriculture Credit System (SNCR), under the coordination of the National Monetary Council and executed by the Central Bank.

The logic behind this reform is analysed below.

VII.2.1. Introducing the 'discipline of the market' : the liberal rationale of the reforms of 1964-66

The new administration explicitly blamed inflation for most of the evils of the previous period of development in Brazil. These evils included the "subversion of order and social hierarchy", the disorganisation of the credit and capital markets, the distortions in the exchange market, the allocative distortions caused by 'illusory profits' the lack of stimulus to invest in basic sectors and residential construction,

and speculation (see MiniPlan, 1964; 30-34). The predominant opinion within the government was that the 'discipline of the market' should be imposed so as to correct these shortcomings in Brazil's development. The following passage from an official document, which presents the government's stabilisation policy, gives the liberal tone which would guide the reforms:

> The government action in the democratic political systems must be oriented towards the establishment of the conditions which warrant maximum efficiency to the functioning of the free-market economies. In this context, the economic planning will implement measures that will create the order in which the market forces will function...[1]

The stabilisation programme of 1964-66 - comprising fiscal, monetary and wage policies - was already a step towards the 'discipline of the market' Concerning fiscal policy, the budget would have to be balanced and the traditional inflationary financing of public deficits had to be suppressed by introducing mechanisms to finance it through public debt. This was the main goal of the 1965 emergency fiscal reform, which raised the tariffs of the public sector and introduced an indexed bond, the Readjustable National Treasury Bond (ORTN). Further, in 1966, a definitive fiscal reform was introduced.

The Banking Reform had the objective of providing the government with tighter control over the money supply. Law 4.595 of 1964 abolished the Superintendency of Money and Credit and created the National Monetary Council (CMN), with the task of setting monetary, credit and exchange policies. It also created a central bank which was supposed to execute the policies determined by the CMN as well as to incorporate the function of bankers' bank and lender of last resort - until then assumed by Banco do Brasil. Finally, Banco do Brasil was expected to give up its function as the monetary authority, but to remain the government's financial agent and a commercial bank.

The logic behind the new wage policy was exactly the opposite of the logic applied to the reform of the financial market: whereas in the latter market inefficiency had been caused by excessive regulation (e.g. usury law, gold clause and the unfair competition of official banks) in the labour market inefficiency was caused by the

---

[1] MiniPlan, 1964: as quoted in Almeida, 1984: 5.

excessive populism of the previous government, which allowed wages to rise beyond the increase of labour productivity. Therefore, the new wage policy redefined the method of readjusting wages (the minimum wage, wages of public servants and of workers in the private sector), which became pegged to an official index. Since, as noted in the previous chapter, this index was repeatedly below inflation, this procedure significantly compressed the real wage in a short period of time.

The strategy also involved the reforms of the housing and of the capital markets. With regard to the housing market, the reformers alleged that the two main factors which constrained its development were negative real interest rates and the ceiling on rents. The former, caused by the ceiling on interest rates, discouraged long- term saving. In turn, the latter dissuaded wealth-owners from investing in the construction of new residences. The consequence of this double repression, the argument continued, was a broad excess demand for housing - or the 'housing deficit' as official documents used to call it. Accordingly the solution to the problem was three-fold: to introduce a new tenancy law which allowed the inclusion of a indexation clause in tenancy agreements; to stimulate long-term saving by indexing housing bills and to promote their transfer to finance construction; and to create institutions specialising in mortgage financing.

The Capital Market Law was the star of the reforms proposed by the government. It was alleged that the market for long-term funds did not develop in Brazil due to the lack of stimulus to save. This was caused by three interrelated factors, two of which have already been noted: creeping inflation, interest rate ceilings and the inefficiency of the existing financial institutions and markets. According to many official documents, there was no scarcity of savings, but these were not channelled into investment because of the factors mentioned above.[2]

---

[2] See e.g. Miniplan, 1964: 77. This position is also indicated by an interview given by Bulhões Pedreira (BP) and Teixeira da Costa (TC), two of those mainly responsible for the drafting and implementing the Capital Market Reform, to Maria Conceição Tavares (MCT) in the *Bulletin*, Institute of Industrial Economics, Federal University of Rio de Janeiro, no. 14, June 1980. For the sake of making the position of the reformers clear, it is worth reproducing a part of this interview:
MCT: According to the logic of the 1964 Capital Market Reform, who would be the saver? Would it be the small saver?
BP: .... The guideline of the reform was the following: in order to organise a market a brokerage system is required ... ; if this system exists, it will, by itself, look for investors. The simple fact that shares are issued also helps to create saving. If there is no share in which to invest, the saver will end

Finally, the reformers blamed the excessive regulation of profits remittance and the discriminatory exchange policy for the limited use of foreign saving. This was then to be stimulated by a consistent exchange policy pegging the cruzeiro to the dollar, by a more liberal policy towards foreign capital and by introducing new institutional mechanisms for indigenous firms to borrow abroad.[3] There already existed a mechanism (Law 4131 of 24 October 1962) which permitted the contracting of loans in foreign currency with a minimum maturity of six months. To this, the following legal instruments were added by the reforms:

● SUMOC's Instruction 289 of 24 January 1965, which permitted the contracting of loans in foreign currency directly between firms abroad and in the country;

● Resolution 63 of 21 August 1964 and 64 of 23 August 1967 which permitted the contracting of loans in foreign currency by commercial banks, investment banks and BNDE. These loans could be split into cruzeiro loans of shorter maturity, to finance

---

up spending. If there is a broker after you, you might buy....

[...]

MCT: I insist on the question, because it is not clear to me who would be the saver in this market. Was it thought, for instance, that the multinationals, which have sufficient retained profits to finance their investment projects and to maintain surplus balances, could be interested in acquiring shares ... [For,] unless you could suppose so [...] I do not see how one could develop a stock market [based on households' savings ...]

BP: There was no intention to create the whole market from scratch. First of all, before 1965 [...] there already existed a stock market in which shares were issued. It is true that by the end of the 1950s inflation and the emergence of the market in bills of exchange made the development of the stock market difficult. The intention was [then] to create an institutional framework for a brokerage system; it was not assumed that there was enough saving to finance all investment, but there was a need to stimulate saving. However one obvious fact existed: some savings were being invested in real estate. Therefore there were indeed some savings [being unproductively used ...]. [...] the development of the stock market required then the execution of the law, the creation of the brokerage system, in the shifting of savings from real estate to other forms of [productive] investment. [...] It is obvious that, [because] real estate investment in Brazil has so many fiscal incentives, it is difficult to convince the individual investor to opt for shares [...] The aim of the reform was to improve the institutional framework so as to make such changes possible [that is, the shifting of saving towards productive investment] ...

In the interview with Teixeira da Costa a similar argument is reproduced:

MCT: ... what I am asking is whether you ever wondered whether previous "savings" were available, ready to be re-shifted [...] I have never learned of case of a stock market being developed by putting brokers after individual savers. Why did one not think from the start of insurance companies [as institutional savers]?

TC: I confess that I am part of the group that romantically thought that, in order to have a really capitalist society, there need be an individual participation in the market, independent from the institutional environment [...]

---

[3] For a extended description of the government's view on the question of the need of external saving and of the logic behind the policy implemented in the period from 1967 to 1973, see Banco Central do Brasil (1973: 11-39).

investment and working capital for national industrial and commercial firms.

To sum up, the financial reform was guided by the view which earlier in this thesis we called the prior-saving argument. That is, the ultimate source of finance is saving, which has to be stimulated by the provision of positive interest rates to savers, and channelled to productive investment through specialised financial intermediaries. The main obstacles to achieving this goal, it was believed, were inflation, financial repression and inefficient (non-competitive) financial institutions. The solution was then to stabilise prices, to dismantle the mechanisms of repression (through indexation) and to stimulate competition between private financial intermediaries. Further, competition was to be enhanced by privatising the credit market (or by reducing the competitive advantage of Banco do Brasil) and opening access for national firms to foreign saving. Now the logic behind the reform has been unveiled, a detailed analysis (of how the reform system was expected to function) is in order.

VII.2.2. The new institutional setting and what was expected from each financial segment

The financial structure envisaged by the reform is summarised below. The segmentation is ordered according to an ascending scale of the maturities of the financial operations from both savers' and borrowers' sides:

Type of Savings	The institutions	The use of funds
Sight deposits	Banco do Brasil (BB) Commercial Banks	Rural credit (BB only) Personal credit Short-term credit to firms
Bills of Exchange	Finance Companies	Working capital
Savings Accounts Housing Bills	Housing finance system	Mortgages
Certificates of Deposits	Investment banks	Long-term investment
Shares Debenture	Stock Markets	Equity
Public Bonds	Bonds Market	Government deficit

The banking system was expected to continue to issue sight deposits in order to provide firms and individuals with short-term credit. The only difference proposed by the reform was the reduction in the competitive advantage of the Banco do Brasil by abolishing its function as the monetary authority, and by eliminating its link with the Treasury represented by the *conta movimento* (current account).[4] Banco do Brasil was however to remain the government's financial agent, and, as such, to implement government programs to finance agriculture.

Finance companies were expected to continue to finance medium-term working capital. However their previous method of discounting bills of exchange was seen as intolerable to the reformers because of its alleged inflationary bias. That is, the reformers assumed that the large spreads between borrowing and lending rates were

---

[4] On this link, see chapter VI above.

caused by finance companies' having to cope with the higher actuarial risks of inflation. But, in turn, these spreads also contributed to inflation as they imposed high financial costs on firms. Therefore, the curbing of inflation required an immediate reduction of these spreads, and the indexation of both ends in the market for bills of exchange was seen as the means to achieve this.[5] Once inflation had fallen, the argument continued, the actuarial lending risk would fall, and finance companies would be able to fund their indexed loans by borrowing with indexed rates (see MiniPlan, 1964: 69-71). Furthermore, savers would receive positive rates, so it was expected that the supply of medium-term credit would increase rapidly and firms would have access to non-inflationary sources to finance their operations.

One of the two main institutional innovations of the 1964-5 reforms was the creation of the National Housing Finance System (SFH).[6] The SFH had the National Housing Bank (BNH) as central bank and lender of last resort to a system of various private saving and loans associations. These associations were allowed to hold indexed savings accounts and to index their loans; up to a high amount, the individual savings deposits were fully which guaranteed by BNH.

Investment banks were to be the stars of the reformed financial structure. They were designed in the image of the American investment bank, and were expected to assume a leading role in the capital market. In addition to capturing funds through foreign exchange loans, it was anticipated that these banks would issue long-term certificates of deposit in order to finance long-term investment projects, and that they would engage in underwriting operations (see Almeida, 1984: 26 and Sochaczweski, 1980: 381-7). It was also hoped that the active role of investment banks and the introduction of indexation would stimulate the development of organized markets for shares and long-term debentures.

Interestingly, the reformers saw no need for any major change in the operation of the stock market. Despite the importance placed on that market in the reform, the policy-makers seemed convinced that all the market required in order to boost its operations was a modern regulation and fiscal incentives. Accordingly, Law 4728

---

[5] There is a clear circularity in this argument, but this did not seem to bother the reformers.

[6] The other was the creation of investment banks, as will be seen below.

introduced new regulations for the market - which were subsequently reviewed by Central Bank Resolution n. 39 of October 1966 - and reduced the taxes on dividend receipts. Furthermore in February 1967, the Decree-Law 157 allowed corporate and non-corporate tax-payers to invest, respectively, 10 and 5% of their tax expenses in special funds (*Fundos 157*) administered by investment banks.

To sum up, the four main financial innovations regarding the capital market introduced by the financial reform of 1964-5 were: (1) the introduction of the indexation of financial assets ('monetary correction' (2) the establishment of financial institutions and instruments specialised in long-term financing, namely the investment banks and the housing financial system; (3) the creation of fiscal incentives to stimulate purchases of shares and debentures; and (4) resolution 63, which opened access for national firms to foreign loans. In a nutshell, the idea was that to replace the State and inflation as sources of investment finance with savings from the private sector; and to replace the public agencies with private institutions as intermediaries of such savings to the private sector. With the creation of investment banks, indexation, incentives for the stock market and the reduction of the lending capacity of Banco do Brasil, the government thought it had corrected the main distortions in the capital market. It was expected that the freer market would be able to increase private savings and loanable funds to finance development thereafter. This is not quite what happened.

VII.3. The implementation of the reform: deviations

The financial structure which emerged from the implementation of the 1964-5 reforms is significantly different from that envisaged by the reforms. First, the government never succeeded in extending the indexation to the private sector, which continued to operate with nominal rates and with wide spreads between lending and borrowing rates. Second, the maturities of operations within the private financial system never lengthened, as was expected by the reform; in fact, such operations remained very short term and became highly speculative. Third, the initial segmentation soon gave away to a rapid process of financial conglomeration, led by the private commercial banks. Fourth, long-term finance continued to rely on

government agencies. Finally, the external debt very soon became more a source of instability than a complement to the loanable funds available to finance internal accumulation. These 'deviations' are closely interrelated, and will be seen in detail below.

VII.3.1. Indexation and the maturity of financial operations

Why indexation never worked

The government expected that indexation would neutralise the effects of inflation on rates of interest, reducing the spreads obtained by the lending institutions, increasing the maturities of the loans and enhancing the efficiency of the allocation of savings (see footnote 29 above). Indexation was to be imposed on all public and private medium to long-term assets and loans, which included the operations of finance companies and investment banks. Before the description of what actually happened is given, a theoretical discussion of the premises behind indexation in the reform is in order.

As regards the supply and maturities of deposits made into the financial system, the rationale behind the 1964-66 reform was that there always existed long-term savings, which were not being channelled towards investment because of the shortcomings of the system of intermediation. The example commonly used to corroborate such a position was the parallel market for bills of exchange which boomed in the 1960s (see Almeida, 1984: 19-20). It was alleged that, if savings were flowing into this deregulated market, then offering higher interest rates would boost savings into the formal financial system as well.

One important point was missed: the fact that, given the income concentration and the oligopolistic character of the Brazilian economy, the greatest part of the so-called financial savings were (and still are) held by corporations.[7] Their holders are thus less interested in the income potential of long-term applications and more in the

---

[7] See Sochaczweski, 1980: 340-2 and especially Almeida, 1984: 63-81. This contrasts with the case of some Western economies (e.g. the United States) where pension funds and other institutional investors hold shares as part of their permanent portfolios.

liquidity of their assets. Therefore, indexation could only stimulate the lengthening of the maturities of the deposits made in the financial system if firms' uncertainty about future cash needs could be significantly reduced, or if the firms were provided with completely elastic sources of liquidity (such as in a perfectly elastic overdraft system). In addition, in an inflationary context the indexation of loans would inevitably increase the borrowers' risk, and therefore, their liquidity preference. This would discourage even further the lengthening of the maturities of the deposits held by firms.

Concerning the supply of finance, the effects of inflation on the lender's risk was acknowledged in several parts of official documents (e.g. MiniPlan, 1964: 71). Nevertheless it was believed that the increase of competition on both sides of banks' balance-sheets would reduce the arbitrage profit and expand the maturities of banks' operations. The government's view completely ignored the fact that in an inflationary environment, with high lender's risk, if the lending institutions can make profits and expand by lending short, they will certainly do so.[8]

To sum up, if indexation were to provide the basis of a market for long-term funds, it would have to neutralise both lender's and borrower's risk, and this was unlikely to happen for two reasons. First, indexation makes future financial commitments less predictable (which adds to the uncertainty of whether the borrower can keep up their prices with inflation) making borrowing too risky a business. Second, indexation increases the lender's risk: if both the paid deposits and the loans are indexed, not only may defaults occur due to unanticipated changes in the rate of inflation, but the costs of obtaining liquidity, when liquidity is required, also become more uncertain. Given these possibilities, it is not surprising that indexation was never introduced into the private financial system. On the contrary, the financial institutions strongly resisted the adoption of indexation on their liabilities, whereas firms clearly preferred to borrow at nominal rates.

---

[8] This was formally discussed in chapter IV above. The argument can be summarised as follows: in an inflationary environment the repayment of a loan is always a bet on the borrower's capacity to increase his cash receipts above the increase of operational costs, which can be done either by raising output and/or increasing mark-up. The lender's risk in this case is twofold: first the risk of involuntary default; second the risk that the interest rate charged does not cover the costs of the funds used and/or the operational cost. The higher the maturity of loan and the higher the rate of the inflation, the greater such risk becomes.

Indexation and the maturities of loans of investment banks and finance companies

From the start indexation created a problem of liability management for private investment banks. These were expected to fund part of their operations by issuing long-term indexed certificates of deposits. However, from the start they found it very difficult to place their long-term certificates of deposit, because of the similarity of these financial instruments to the 180-days bills of exchange issued by the finance companies. The government was nevertheless convinced that the success of the CDs was a matter of time and, as a compromise move, allowed the investment banks to discount bills of exchange (Resolution 18 of 1966). The measure was meant to be provisional, as such operations were only allowed until 1972. Nevertheless, already by 1967 the government had permitted investment banks to issue discounted deposit certificates.

Investment banks then began their operations, issuing certificate of deposits with (high) nominal interest rates and transferring the funds obtained through their access to foreign loans (Resolution 63). Consistent with their liability structure, they reduced the maturities of their loans and specialised in the financing of short and medium-term working capital. Indeed, by 1971 loans for working capital represented more than 80.6% of their freely allocated loans (see Table VII.1).[9]

The government also attempted to force finance companies to adopt indexation through fiscal means, as Law 4728 of 1965 imposed a heavy tax (15%) on revenues obtained from discounting bills of exchange. Despite this measure, the market for discounted bills of exchange continued to expand rapidly (see Table VII.2). Already in June 1966, the government introduced an emergency measure by delimiting the spread to a maximum ceiling, which in practice institutionalised it under the awkward title of 'pre-fixed monetary correction' (correção monetária a priori). One month later, the government finally accepted the spread (Central Bank Resolution 32) and, furthermore, permitted finance companies to reduce the minimum maturity of acceptance contracts to 6 months.

---

[9] That is, loans which were not funded by transfers of public funds or foreign borrowing.

The reduction of maturities of assets issued by investment banks and finance companies set in motion another deviation from the reform: the overall reduction of the maturities of loans from specialised lending institutions. This began with the government allowing investment banks to discount bills of exchange in 1966 in order to compete with those issued by finance companies. Because of the short maturity of these assets, investment banks rapidly shifted their operations towards the more secure financing of working capital for its clients, a market which traditionally belonged to finance companies.

In the competition between finance companies and investment banks for loans to finance working capital, the former were at a clear disadvantage. This was because the latter were also allowed to obtain foreign funds through Resolution 63, at a time when the liquidity in the international banking system was high and international interest rates were falling rapidly.[10] This precipitated the move of finance companies to the financing of consumer credit, which occurred rapidly from 1966 onwards. In that year, the government institutionalised the "direct consumer credit" - CDC -,[11] which was fundamentally based on a system of collateral (the so-called *alienação fiduciária*) by which the consumer good remained in the property of the finance company until the total repayment of the loan.

The banks also started pressurizing the government to allow them to issue deposit certificates. Not only did the government concede, but it also reduced the minimum maturity of that instrument to 180 days. Therefore, the private institutions were concentrating on the short end of financial operations.

To sum up, the fact that the government did not manage to impose indexation on the private financial sector triggered a complex interplay of market responses and political pressures which ended up with the full acceptance by the government of the *'pre-fixed'* monetary correction. In turn, this was closely followed by the reduction of the maturities of the financial operations. In other words, the government permitted the private financial sector to continue to operate in the very short term, issuing assets

---

[10] In fact, the cost of borrowing through Resolution 63 in real terms was not smaller than borrowing from any commercial banks or finance companies. But the maturities of the loans were in general longer for Resolution-63 loans.

[11] Resolution 45 of 30 of December.

which paid nominal rates, and to maintain the old regime of discounting firms' bonds. Finally, the fact that the maturities of loans from the private financial sectors continued to be very short, opened another important chapter in the financial development of Brazil after the reforms of 1964-6: the process of financial conglomeration.

VII.3.2. **Financial conglomeration: the emergence of the big private banks**

Another aspect of the reformed financial structure in the 1970s was the tendency towards financial concentration and conglomeration. This conglomeration should be seen as a direct result of two factors: firstly, the reduction of the competitive strength of Banco do Brasil in the mid-1960s, exactly when deregulation of the interest rates allowed banks to obtain significantly high profits; secondly, the process of shortening of the maturities of financial operations dealt with by private institutions.

Figure VII.2 - Indicators of the shortening of financial operations after the financial reform of 1964-66: turn-over of Treasury Bills (LTN) in days and average period of cheque clearing

Source: Zini, 1982, p. 279.

172
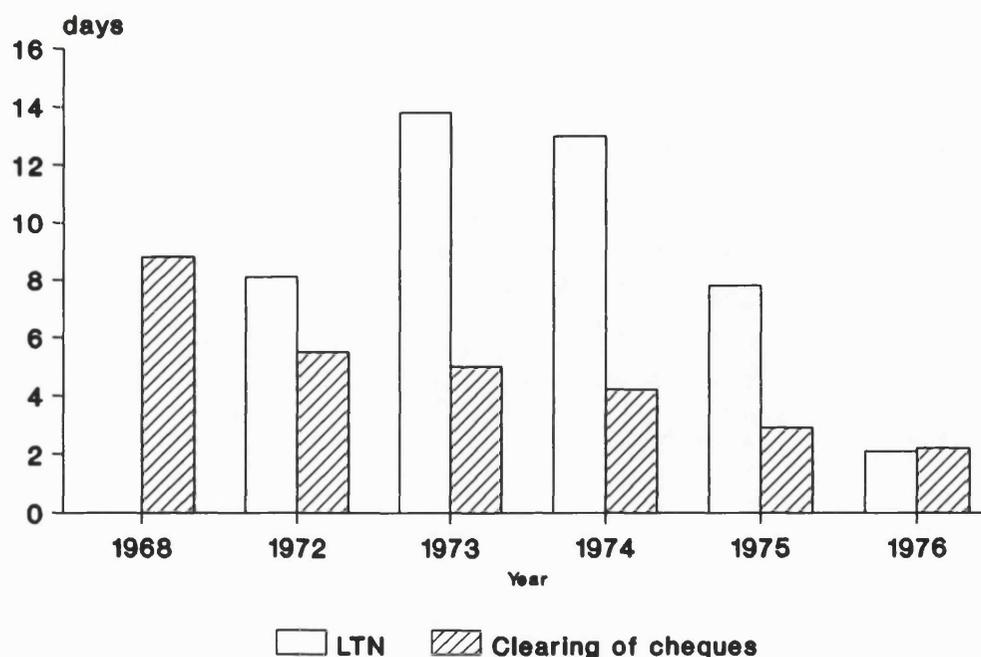
Figure VII.1 - Profitability of the 20 largest banks
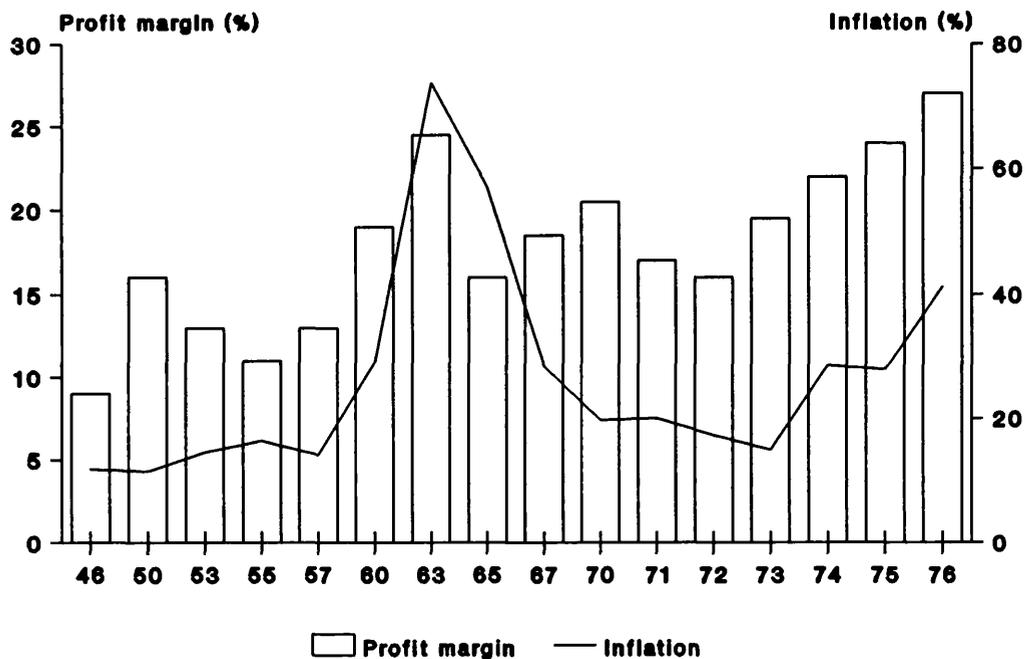
Regarding the second factor, as the maturities of financial assets and loans in these markets shortened (see Figure VII.2), segmentation rapidly lost any practical meaning. In turn, the fact that banks were financial powers and had a wide branch infrastructure, even before the financial reform, made them the strongest competitors. Hence they managed to rapidly absorb within their departments operations typical of investment banks, finance companies and insurance companies (see Table VII.3).

VII.3.3. The reform and the stock market

As part of the liberal direction of financial reform, the government attempted to stimulate the 'democratisation' of the stock market by giving new fiscal incentives to share-holders and firms. These were: zero taxation on share bonus payments; reduction of taxation on revenues accrued from transactions with shares;[12] and

---

[12] For instance (1) tax exemption on dividend payments for joint-stock companies (whereas all other companies would have to pay 5 % tax on dividends); (2) lower direct taxation for joint-stock companies' share-holders; (3) tax exemption on capital gains due to the differential between market stock prices and declared value of capital (article 58 of Law 1728).

monetary correction of firms' working capital (which meant that share values would be automatically revalued according to the official price-index). Finally, the government allowed corporate and non-corporate tax payers to invest, respectively, 5 and 10% of their tax expenses on funds administered by investment banks (the so-called *Fundos 157*). This was perhaps the most important fiscal incentives. Even though part of these *Fundos 157* had to be remitted to the government after some period of time, in effect this allowance meant that the government was giving up tax receipts in order to stimulate the development of stock markets and investment banks.

Figure VII.3 - Boom and crash of the stock market: yearly growth rates of the Rio de Janeiro stock market index (IBV-RJ)
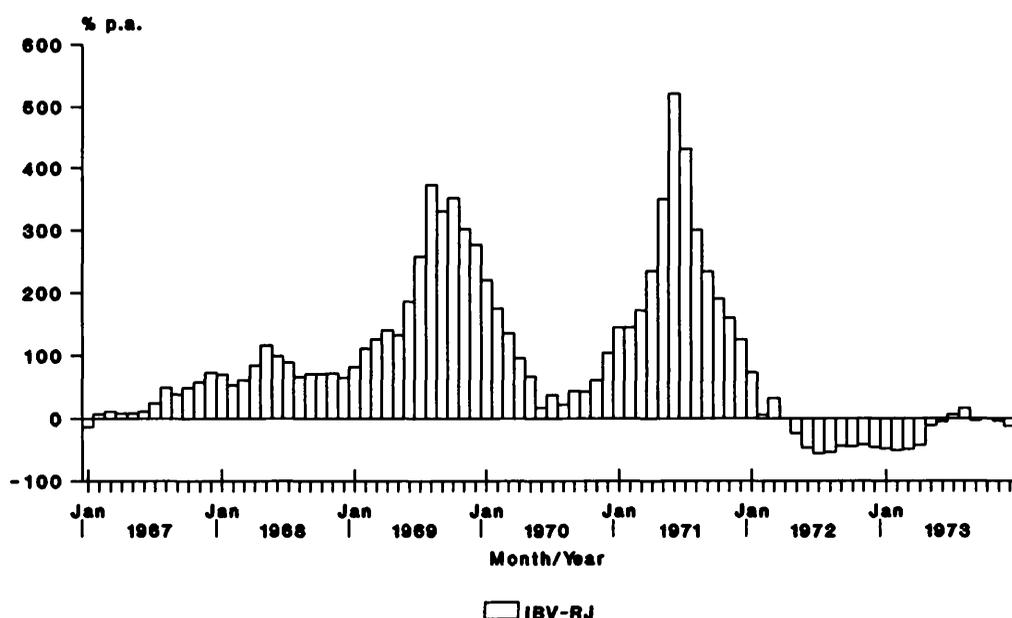
Source: Banco Central do Brasil,
Monthly Bulletin, 13(3),
March 1977, pp. 96-8.

These additional incentives generated an unprecedented boom in Brazil's thin stock markets, as Figure VII.3 illustrates. However, the market showed clear signs of fragility due to its thinness: already by August 1969 it suffered a violent downturn which led to a decline in transactions until 1970. The government was nonetheless determined to foster the market and extended the fiscal incentives by allowing for the stretching of the redemption maturity date of the fiscal funds and by exempting taxes

174

on the retained profits of open companies. The result was again a boom, where price/profit earnings ratios of 50 to 100 were commonly observed.

Even though the stock market boom stimulated share issues, the trend was not sustained. The boom was followed by a crash in 1971, which led not only to a shrinkage of share dealings but also of new issues (see Table VII.4 below). Indeed, the violence of the crash created an overall mistrust of stock markets as a provider of firms' financing. The consequences of these developments will be further addressed below.

VII.3.4. The process of financial widening, speculation and the rates of interest

After 1964 a rapid financial widening was observed (see Figure VII.4). This process is interpreted by many authors as representing a genuine financial development (see e.g. Cysne et al: 241-2). What is often overlooked is that this financial widening took place in an increasing speculative atmosphere.

Figure VII.4 - Two indicators of the financial deepening after 1964: financial assets as percentage of GNP and non-monetary assets as percentage of total assets
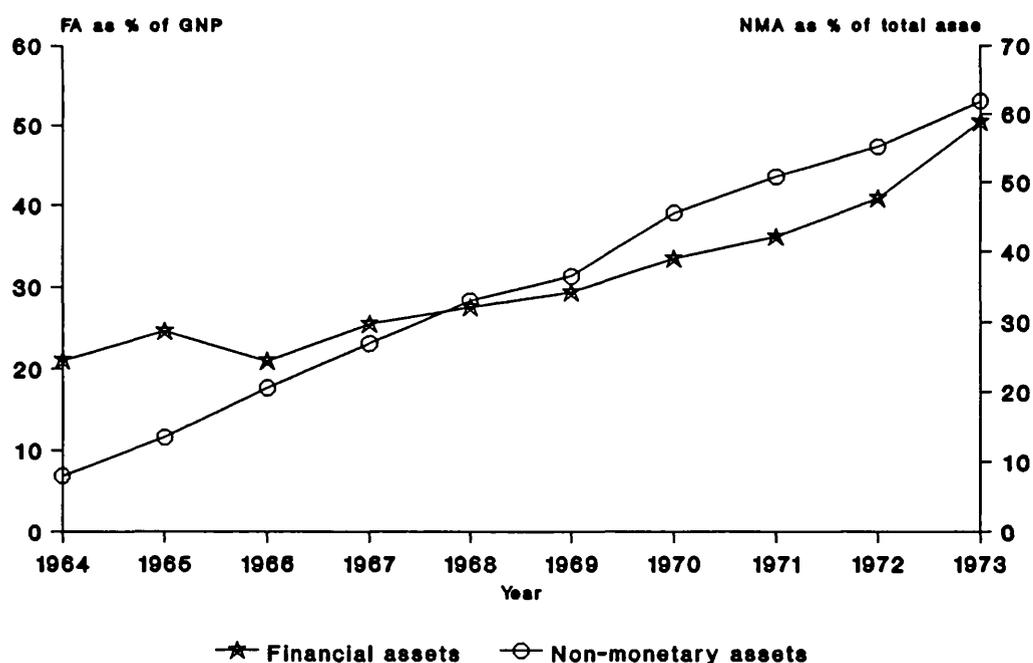
Source: Table VI.2.

Two interrelated factors led to such an atmosphere: firstly the coexistence of

indexed and non-indexed assets in an environment of persistent inflation; secondly, the shortening of the maturities of assets issued by both private and public institutions. The process of the shortening of maturities and its relation to indexation has already been discussed above, so now it only remains to explain the speculative bias of the segmentation of interest rates.

The introduction of monetary correction generated a dichotomic structure, where some assets were indexed and others bore nominal interest rates. This permitted investors between different assets whenever inflationary expectations changed dramatically.[13] Suppose that a private financial institution funds its operations by issuing non-indexed assets of shorter maturity than its loans. If it is assumed that the carrying cost of such an asset is zero, the initial equilibrium position can be represented as follows:

$$q_i + r_i + a_i = q_n + r_n + a_n \qquad \{i = \text{indexed}; \ n = \text{non-indexed}\}$$

where q stands for the own-rate, r for the liquidity premium and a for the capital-gain or loss due to inflation. Because a for indexed assets will only be determined at the end of the period, any change in expectations of inflation will change this equilibrium, causing a shift of funds to or from indexed assets. If, for instance, there is an upward revision of such expectations, then it is worth selling the non-indexed asset in order to buy the indexed asset; and vice-versa.

In the context of Brazil's post-1964 financial structure, non-indexed assets either funded the operations of some private institutions (e.g. finance companies) or corresponded to voluntary reserves of banks. The shift of funds as described above would provoke an immediate reaction as those institutions would bid for funds to replace those lost in the shift. Hence, an upward revision of inflationary expectations could also cause very abrupt upward changes in the rates of interest of various assets.

---

[13] That is, the big investors such as big corporations and financial institutions themselves, who have the time and the money to establish financial departments with the specific task of making capital gains with such financial transactions. The small investor remained dependent on financial intermediaries and generally invested in financial assets as a form of hedge against inflation.

Figure VII.5 - The convergence of real asset rates after the reform (1964-73)
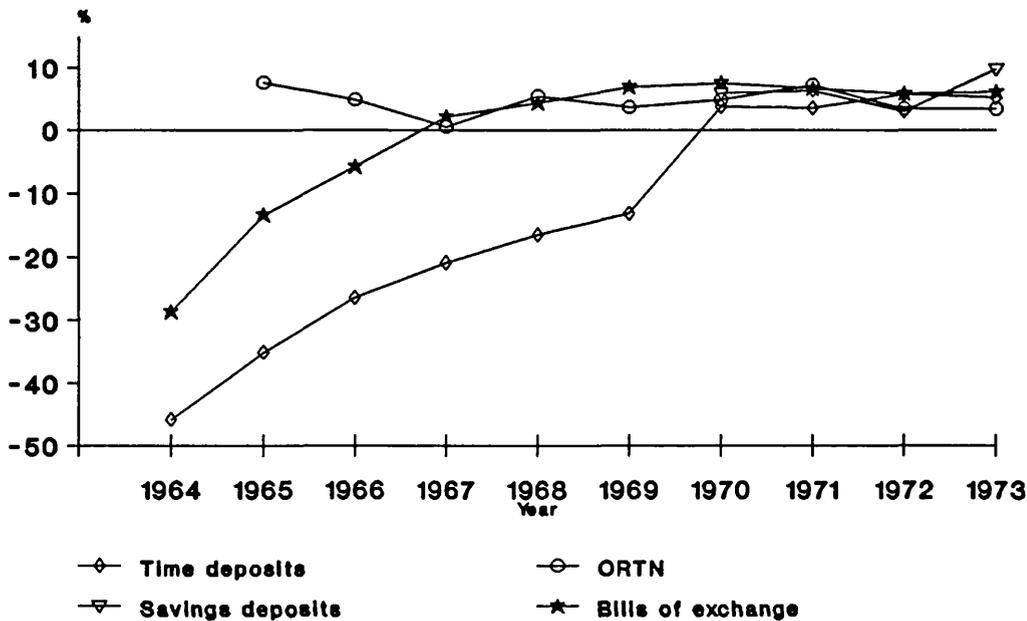
Source: Table VII.6.1.

The first consequence of this tendency was the convergence of the nominal rates (see Figure VII.5) towards the rates paid by the readjustable treasury bond (ORTN). This convergence was only possible because the rate of inflation was actually declining during the period 1966 to 1970, but in subsequent periods the non-indexed rates tended to be higher than the indexed ones. Regarding the loan rate, however, lending institutions continued to behave as suggested by the model developed in chapter II above. That is, they maintained a mark up pricing system. The mark up would however increase as inflation rose (see Table VI.6). In contrast to the earlier period, indexation and then the liberalisation of interest rates in 1976, meant that loan rates could reach very high levels.

VII.3.5. The reform and external debt

In contrast to the earlier financial structure, the system that emerged after 1964 was significantly more open to foreign borrowing. Prior to the reform, national private corporations had the least access to sources of long-term financing. Resolution

63 provided national firms with the capacity to borrow foreign currency on conditions (maturities and interest rates) which the internal financial system had not, until then, been able to provide.

These legal changes affected the flows of foreign borrowing almost immediately: foreign borrowing rose from US$ 373 million in 1965 to US$ 508 million in 1966, and then increased almost steadily from US$ 583 million in 1968 to US$ 4.5 billion in 1973. The financing needs relating to the transfer of real resources also rose in this period; however the continuous rise of international reserves occurred because loans rose faster than these needs.

This trend of borrowing beyond the needs of the country for purely financial reasons can be better illustrated with the help of the classification of the balance of payments developed in the previous chapter. According to this, real resources transfers (RRT) comprise the results of the trade and the non-factors accounts; the capital costs (CC) encompass interest charges, amortisation of loans and profit remittances; and the capital inflows (CI) consist mainly of net foreign investment and loans. Given that the sum of these three must equal the change in reserves (Res), and that CI is representative of the net increase in debt, the ratios of the three aforementioned variables (RRT, CC and Res) over CI give an indication of the causes behind the increase of the external debt.

Figure VII.6 indicates that during 1967, the use of external borrowing to finance the transfer of real resources was at a minimum if compared to the increase in reserves that such loans caused and the payment of the costs of capital. These consisted mainly of interest charges, which grew proportionally with the increase of the external debt.

This tendency for over-borrowing was caused by both internal and external reasons. The internal reason was pointed out above: in contrast to the period 1947-55 it became much easier, especially for national firms, to borrow abroad. From the external (supply) side, the development of the Euromarkets in the 1960s and 1970s greatly extended the credit-creating capacity of the international banking system, which was indeed flooding LDCs with cheap money (on this see e.g. Aglietta, 1985). Due to this increase in liquidity in the international banking system, credit was abundant and at costs and terms which were infinitely more favourable than the ones

Figure VII.6 - The main causes of Brazil's rapidly increasing debt in 1967-73
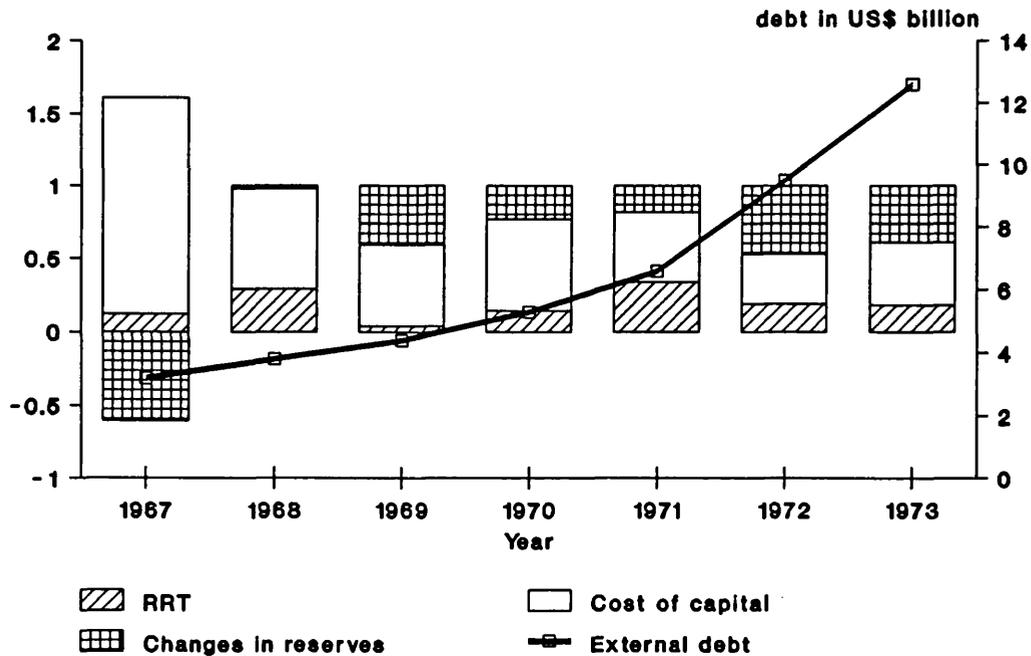
available in Brazil (Davidoff Cruz, 1984: 34). And given the structural deficiencies of the national financial system, it was only natural that firms preferred to obtain foreign credit to finance their expansion, even if for the economy as a whole this creates a need for additional finance of real resources transfers.

VII.4. The reform and the economic 'miracle'

The period 1967-73 was one of unprecedented economic growth for Brazil's economy. This period is characterised by an average yearly growth rate of real GNP and real GNP per capita of 11.2% and 9.7% respectively. Growth was led by industry, which grew at an average of 13.5% p.a. in the period, and specifically by the consumer durables and construction industries (see Tables VII.8.1 and VII.9). This output performance was crowned by an almost steady decline of inflation from 38.5% in 1966 to 14.9% in 1973. Finally, the period was characterised by a fairly equilibrated balance of payments permitted by the steep rise in exports from US$ 1.6 billion in 1967 to US$ 6.2 billion in 1973. Given the extraordinary performance on both the internal and external fronts, the literature has designated 1967-73 the period

of the economic 'miracle' (see Table VII.8.3).

How miraculous this economic boom was is questionable. It must be borne in mind that this came after four years of economic slow-down, which had left high levels of idle capacity. This is confirmed by the fact that, even though there was no significant investment in the consumer durables sector, all of the durable items represented in Table VII.6 had average rates of growth superior to 10 %. Widespread idle capacity made it possible to stimulate growth by increasing demand.

The boom can be better understood as a mixture of exceptional external and internal conditions during the period and the government's looser monetary and credit policies. On the external front, government implemented an aggressive policy, which included fiscal and credit subsidies to exports (Pereira, 1974) after 1968. The fast increase in reserves generated an expansionary pressure on the monetary base which was not neutralised (see Table VII.7). With regard to the internal front, the monetary policy was eased after 1967, Banco do Brasil's loans increased rapidly and the government increased its investment.

Thus the recovery could be seen as being triggered by classical expansionary instruments. However the maintenance of growth and the subsequent boom cannot be totally explained by the initial determinants of expansion. The continuing widening of demand for consumer durables was determined by two main factors: (1) firstly, the high income concentration and stability of employment of white-collar workers associated with the increase in jobs generated by the expansion of government investment (including construction) in 1967; (2) secondly, the institutionalisation of hire purchase credit and the increased competition in this sector of the financial system, which created the credit facilities to meet increasing demand. One of the roles of the reforms in 1964-66 was exactly the provision of these facilities, as we shall see below.

The role of the reforms in the economic boom

The financial reforms contributed significantly to the economic 'miracle' for at least three reasons: firstly, with the creation of the housing finance system it provided the mechanisms to finance the rapid growth of the construction sector.

Secondly, the shifting of the operations of finance companies to consumer credit allowed the biggest consumer durables boom ever in Brazil (see Table VII.6). Finally, the specialisation of investment banks in the financing of working capital provided the financial basis for the expansion of industrial sector operations.

The role of the reformed financial sector is reflected in the data on loans to the private sector, which can be summarised as follows: (1) firstly, the investment banks, whose loans grew at a real average rate of 55.0%, increasing their share of the total loans to the private sector (TLPS hereafter) from 4.8% in 1967 to 12.7% in 1973; (2) secondly, the finance companies, whose loans grew in real terms at an average 40.3%, raising their portion in TLPS from 10.4% in 1967 to 15.1% in 1973; and finally the housing finance system, represented by the National Housing Bank (BNH), savings and loan associations and Federal and State Savings Banks, who saw their share of TLPS more than double from 1967 (8.5%) to 1973 (17.4%). These three segments increased their joint participation in the loans to the private sector from 25,0% in 1967 to 45.2% in 1973 (see Table VII.2.4).

It is important to stress that with the exception of the housing finance system, it was the failures of the reform (as regards the operations of the finance companies and investment banks) which allowed the rapid expansion of lending associated with the 1967-73 boom. In other words, it was the enhancement of the private sector's short-term lending capacity which provided the liquidity required for the fast absorption of the productive capacity created in the 1950s. However, the intensity of this boom was such that the economy quickly approach full capacity in 1970; and it is then that the reformed financial structure showed its perverse shortcomings, hindering the continuance of growth. The analysis of the effects of such shortcomings on Brazil's development in 1974-83 is the topic of the next chapter; but before that, it remains to spell out the dysfunctionalities that the new financial structure had already revealed by 1973.

VII.5. The effects of the reform on the functionality of the financial system

The financial system is functional for development if it has credit-creating capacity and this capacity is used to accommodate the additional demand for credit

related to the 'investment finance motive' and to additional transactions demand; if it has funding capacity in order to reduce the increasing borrower's and lender's risks; if it can maintain robustness throughout the process of growth, avoiding the possibility that increasing financial fragility might degenerate into financial instability. Given the particularities of the international financial structure, where the funding mechanism for loans to LDCs never emerged, it was also shown that a functional financial structure should limit the use of foreign loans to financing the transfer of real resources which complement internal accumulation.

The financial structure which emerged from the reforms of 1964-5 was highly dysfunctional in the process of development. Firstly, regarding finance, even though the credit-creating capacity of the private financial structure was significantly enhanced, this was directed towards short-term operations. In addition, indexation did raise the rates of interest, which nevertheless did not deter the rapid rise of the indebtedness of firms and consumers. In other words, the financial fragility of the system increased. The system was only reasonably stable during the period 1967 to 1973 because of relatively low inflation and the rapid increase of profits and employment.

Secondly, the mechanisms to fund investment never developed and indeed were discouraged by the increasingly speculative environment of the financial markets. The market for securities, for instance, suffered a considerable setback after the stock market crash in 1971. The issuing of other private long-term securities, such as debentures, never really took off. The organised financial markets in Brazil were never much more than money and quasi-money markets, whose development depended on speculation on government bonds.

Thirdly, given the lack of funding mechanisms, the only source of long-term financing continued to be the State. This however increasingly linked its debt to operations to sterilise the expansion of liquidity caused by the flood of foreign loans permitted by resolution 63 and Law 4131. Further, since nominal rates of interest were raised by indexation, the very cost of refinancing the roll-over of the public debt increased the need to expand such a debt.

Having mentioned the relationship between external and internal debts, the fourth dysfunctionality is related to the use of foreign finance. The reform permitted

easier access to the international banking system at a time when this was experiencing a liquidity boom, whereas in Brazil the credit conditions remained very tight for firms. This caused an unprecedented rise in external debt which, to start with, had little to do with the need to finance the real resources gap or the current account of the balance of payments. In fact, the government had to strive to prevent the increasing levels of international reserves from neutralising its internal tight-money policy required to fight inflation. As the external debt rapidly increased, the cost of financing started to increase, making the external debt even less functional to Brazil's development.

As noted above, the shortcomings of this financial structure, crippled by speculation, were not clearly perceived at the time of the demand-led boom of 1967-73. It is only when real development, and therefore long-term investment, was resumed in 1974 that the problems showed their full extent. In the meantime, the reformers could claim to the world that the financial widening observed in 1964-73 was proof that the financial reform had been successful in increasing savings and the efficiency of its allocation.

VII.6. Conclusion

The recession which began in the early 1960s showed the limitations of the financial system in supporting the extraordinary development of productive forces in the post-War period. Those limits were particularly: (1) firstly, the lack of medium-term finance, especially hire purchase credit; and (2) secondly, the lack of financing of private long-term physical capital.

The financial reforms, whose logic was based on the identification between finance and savings, did succeed in enhancing the sources of finance for government expenditure, consumption and residential construction. In this way, the financial reform contributed to the economic boom from 1967 to 1973. However, the reform also introduced some structural dysfunctionalities of the financial system, such as the tendency towards the short term, speculation and foreign indebtedness beyond the real needs for the development of the country. On top of these dysfunctionalities, to the private mechanisms of investment finance and funding continued to be

underdeveloped despite all the efforts to develop them during and after the reform.

In the period from 1970 on, the symptoms of the continuing structural deficiency of the financial structure were already visible. These took the form of increasing speculation and the accumulation of foreign indebtedness far above that needed to finance real resource transfers from abroad. But it was with the oil shock of 1973 and the decision of the Brazilian government to adjust to the shock by expanding the process of import substitution, that the shortcomings of this system were revealed to their full extent. This is the topic of the chapter VIII.

STATISTICAL APPENDIX TO CHAPTER VII

Table VII.1 - Investment Banks: Structure of Balance-Sheets (% of total assets)

Year	1967	1968	1969	1970	1971	1972	1973
ASSETS							
1. Reserves	3.0	2.7	4.3	3.2	4.7	3.9	2.8
2. Transfers and Loans	78.6	69.9	71.6	68.1	64.9	70.8	70.9
2.1. Transfers	6.0	13.2	11.9	12.0	15.6	25.8	25.2
Public Funds (FINAME, FIPEME & BNH)	4.9	4.4	4.3	3.8	4.2	3.7	6.1
Foreign Borrowing (Resolution 63)	1.1	8.7	7.6	8.2	11.4	22.1	17.8
Other	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.2
2.2. Other Loans and Acceptances	72.5	56.7	59.7	56.1	49.4	45.0	45.7
Fixed Capital	...	...	...	...	3.5	2.3	2.3
Working Capital	...	...	...	...	39.8	34.3	39.5
Consumer Credit	...	...	...	...	6.1	5.7	3.9
3. Bonds	7.8	11.3	11.6	12.3	14.4	8.4	8.4
4. Other Accounts	10.6	16.1	12.5	16.4	14.6	15.7	16.1
5. Fixed Capital	...	...	...	...	1.3	1.2	1.7
LIABILITIES							
1. Term Deposits	8.8	17.7	23.1	34.3	38.8	36.5	42.0
2. Transfers	5.7	13.0	11.3	11.5	15.4	25.9	25.1
FINAME, FIPEME, BNH	4.6	4.2	3.7	3.4	4.1	3.5	6.6
RES. 63	1.1	8.8	7.6	8.2	11.3	22.4	17.6
Other	...	...	...	...	...	...	0.9
3. Other Liabilities	71.9	55.9	50.6	41.2	31.1	26.1	18.9
4. Net Worth	13.5	13.4	15.0	12.9	14.8	11.4	13.9

Source: Banco Central do Brasil, Monthly Bulletin, February 1978, pp. 66-9.

Table VII.2.1. Financial assets: 1967 million cruzeiros and growth rates

Monetary Assets (MA) [1]　　　　　　　　　　Non-Monetary Assets (NMA)[1]

Year	Currency	Demand deposits		Total MA	Time Deposits	Passbook savings	Bills of Exchange	Housing Bonds	Government Bonds			TOTAL NMA	FA[1]
		Banco do Brasil	Other[2]						ORTN	LTN	Other		
Average yearly growth rates (%)													
1967-73	11.6	14.4	13.4	13.2	52.7	96.1	33.7	40.7	19.5		157.9	44.8	26.1
In constant 1967 million cruzeiros													
1964	3.2	2.1	8.9	14.2	0.4	0.0	0.6	0.0	0.1	n.a.	0.1	1.2	15.5
1965	3.1	2.4	10.7	16.2	0.5	0.0	1.2	0.0	0.8	n.a.	0.1	2.5	18.7
1966	3.0	2.0	8.4	13.5	0.4	0.0	1.2	0.1	1.8	n.a	0.0	3.5	17.0
1967	2.9	2.3	10.2	15.4	0.7	0.1	2.1	0.3	2.5	n.a	0.0	5.7	21.1
1968	3.3	2.6	11.2	17.1	1.2	0.3	3.7	0.5	2.8	n.a.	0.0	8.5	25.6
1969	3.6	3.0	12.3	18.9	1.4	0.6	4.1	0.8	3.9	n.a.	0.0	10.9	29.8
1970	3.8	3.0	13.0	19.8	2.5	1.2	5.5	1.1	5.3	0.4	0.7	16.6	36.4
1971	4.0	3.6	14.0	21.6	4.4	1.8	6.7	1.5	5.4	1.8	0.7	22.3	43.8
1972	4.6	3.8	17.0	25.4	6.8	3.1	8.3	2.0	6.3	4.1	0.7	31.2	56.6
1973	5.7	5.1	21.7	32.5	8.9	4.9	12.0	2.3	7.2	6.0	11.2	52.5	85.0

Source: From 1964 to 1972: Banco Central do Brasil, Monthly Bulletin, 10(1), January 1974, pp. 4-11; from 1973 to 1979: idem, 16(11), November 1980, pp. 82-3; from 1980 to 1983: idem, 20(2), February 1984, pp. 74-77.

Note: (1) deflated by the general price index as in Table VI.1. (IGP-DI); (2) includes all other commercial banks and federal and state savings banks.

Table VII.2.2. Financial assets: percentage of total assets

	Monetary Assets (MA)				Non-monetary assets (NMA)								% of GNP			% Total of total assets	
Year	Currency	Demand deposits		TOTAL	Time Deposits	Passbook savings	Bills of Exchange	Housing Bonds	Government Bonds			TOTAL	MA	NMA	Total	Indexed	Non-indexed
		Banco do Brasil	Other[1]						ORTN	LTN	Other						
1966	17.8	12.0	49.6	79.4	2.4	0.1	6.9	0.4	10.6	n.a.	0.3	20.6	14.5	2.3	16.7	11.4	88.6
1967	13.9	10.7	48.4	73.0	3.3	0.4	10.0	1.4	11.8	n.a.	0.2	27.0	12.7	3.3	15.9	13.7	86.3
1968	12.8	10.3	43.8	67.0	4.5	1.0	14.3	2.0	11.0	n.a.	0.1	33.0	13.4	5.0	18.3	14.2	85.8
1969	12.1	10.2	41.2	63.5	4.7	2.0	13.9	2.7	13.2	n.a.	0.0	36.5	14.1	6.9	21.0	17.9	82.1
1970	10.3	8.4	35.8	54.5	6.8	3.3	15.0	3.1	14.5	1.1	1.8	45.5	14.5	8.4	22.9	22.6	77.4
1971	9.1	8.2	31.9	49.2	10.1	4.1	15.3	3.3	12.3	4.1	1.6	50.8	13.6	11.4	25.0	21.3	78.7
1972	8.1	6.7	30.0	44.8	11.9	5.4	14.7	3.5	11.2	7.2	1.2	55.2	13.3	13.7	27.0	21.4	78.6
1973	6.7	6.0	25.5	38.2	10.5	5.7	14.2	2.7	8.5	7.1	13.2	61.8	13.1	16.1	29.2	30.1	69.9

Source: Table VII.2.1.

Notes: (1) include all other commercial banks and federal and state savings banks

Table VII.2.3. Loans to the private sector: in 1967 million cruzeiros and growth rates

	Banking System (BS)			Non-Banking System (NBS)											TOTAL
	Banco do Brasil	Other Comm. Banks	Total BS	Finance companies	Investment Banks	BNH[a]	HCC	SLA	CE	BNDES[a]	BDE	PIS	BNCC	Total NBS	
1962-66	-7.9	-3.2	-5.0						-2.0	-16.0			12.3	6.0	-2.7
1967-73	28.8	21.2	23.7	40.3	55.0	42.6	72.2	104.3		37.7	26.2	89.8	12.5	49.5	34.8
1966	3191	6294	9486	1348	n.a.	94	n.a.	n.a.	789	393	n.a.	n.a.	29	3281	12766
1967	3445	8051	11496	1631	755	303	196	n.a.	844	414	30	n.a.	47	5361	16857
1968	5599	10492	16092	3015	1303	800	614	26	1220	827	211	n.a.	67	11442	27533
1969	7248	12142	19390	3088	2278	1345	922	119	1512	1186	286	n.a.	87	16032	35422
1970	8550	13591	22141	3659	3121	2105	1300	193	2451	1493	373	n.a.	76	21984	44125
1971	10475	16380	26855	5968	4496	2708	1876	265	3147	1308	531	43	89	29669	56524
1972	12033	20382	32415	7870	7687	2407	3479	571	3992	1322	910	268	87	41589	74005
1973	15709	25559	41268	12438	10477	2549	5104	916	5758	1673	1402	869	95	59823	101091

Source: 1966-72: Banco Central do Brasil, Monthly Bulletin, 10(1), January 1974; 1973-79, idem, 16(1); 1980-83, idem, 20(2), February 1984.

Notes: (*) includes loans to public enterprises (as in the statistics of Brazil's central bank); (a) net lending which equal total lending minus funds intermediated to other financial institutions.

Abbreviations: BNH = National Housing Bank; CE = savings banks; BNDE(S) = National Social and Economic Development Bank; BDE = state development banks; PIS = program of social integration; BNCC = National Agricultural Credit Bank.

189

Table VII.2.4. Loans to the private sector: percentage of total loans[*]

	Banking System (BS)			Non-Banking System (NBS)											% of GNP	
Year	Banco do Brasil	Other Comm. Banks	Total	Finance companies	Investment Banks	BNH[a]	HCC	SLA	CE	BNDE(S)[a]	BDE	PIS	BNCC	Total	BS	NBS
1966	25.0	49.3	74.3	10.6	0.0	0.7	0.0	0.0	6.2	3.1	0.0	0.0	0.2	25.7	11.7	15.8
1967	20.4	47.8	68.2	9.7	4.5	1.8	1.2	0.0	5.0	2.5	0.2	0.0	0.3	31.8	13.9	20.4
1968	20.3	38.1	58.4	11.0	4.7	2.9	2.2	0.1	4.4	3.0	0.8	0.0	0.2	41.6	17.4	29.7
1969	20.5	34.3	54.7	8.7	6.4	3.8	2.6	0.3	4.3	3.3	0.8	0.0	0.2	45.3	19.1	34.9
1970	19.4	30.8	50.2	8.3	7.1	4.8	2.9	0.4	5.6	3.4	0.8	0.0	0.2	49.8	20.4	40.6
1971	18.5	29.0	47.5	10.6	8.0	4.8	3.3	0.5	5.6	2.3	0.9	0.1	0.2	52.5	22.1	46.6
1972	16.3	27.5	43.8	10.6	10.4	3.3	4.7	0.8	5.4	1.8	1.2	0.4	0.1	56.2	23.4	53.4
1973	15.5	25.3	40.8	12.3	10.4	2.5	5.0	0.9	5.7	1.7	1.4	0.9	0.1	59.2	24.5	60.0

Source: 1966-72: Banco Central do Brasil, Monthly Bulletin, 10(1), January 1974; 1973-79, idem, 16(1); 1980-83, idem, 20(2), February 1984.
Notes: (*) includes loans to public enterprises (as in the statistics of Brazil's central bank); (a) net lending which equal total lending minus funds intermediated to other financial institutions.
Abbreviations: as in Table VII.2.3.

Table VII.3. Indicators of Concentration of the Banking System

Year	1966		1970		1975	
	Private	Total including Banco do Brasil	Private	Total including Banco do Brasil	Private	Total including Banco do Brasil
Participation in Total Deposits (%)						
The largest	8.2	55.5	11.1	43.4	15.7	34.6
5 largest	32.1	66.5	39.7	61.2	44.8	55.2
10 largest	49.7	75.0	60.5	73.1	64.5	68.1
Participation in Total Loans (%)						
The largest	1.1	57.2	7.8	44.0	14.9	43.5
5 largest	3.3	61.6	28.8	58.7	42.7	60.3
10 largest	4.7	62.8	47.3	67.6	62.9	69.7
Participation in Total Net Worth (%)						
The largest	7.0	57.2	9.8	44.0	13.9	43.5
5 largest	24.5	61.6	27.9	58.7	38.0	60.3
10 largest	40.1	62.8	43.7	67.6	56.9	69.7

Source : Moura e Silva (1979: 48).

191

Table VII.4. Some indicators of the stock market (1967-73)

Year	Volume of stocks traded on the Rio and Sao Paulo Stock Exchanges		Primary asset issues			
	Volume (Cr$ million)	Real change in volume[a]	Cr$ million	Real growth rate[a]	(3) as % of total investment	(3) as % of (1)
	(1)	(2)	(3)	(4)	(5)	(6)
1967	269.0	38.3	86.0	257.2	0.5	32.0
1968	416.0	21.0	527.0	393.8	2.0	126.7
1969	2461.0	391.6	468.0	-26.1	1.3	19.0
1970	4558.0	56.7	531.0	-5.0	1.1	11.6
1971	25553.0	377.9	119.0	82.9	1.8	0.5
1972	18005.0	-40.0	1357.0	-1.0	1.6	7.5
1973	17852.0	17.7	913.0	-41.5	0.7	5.1

Source: Banco Central do Brasil, Monthly Bulletin, October 1978, pp. 178-9.
Notes: (a) deflated by the general price index (IGP-DI).

Table VII.6 - Sales of consumer durables: selected items (1967-73)

Year	1967	1968	1969	1970	1971	1972	1973	Average Yearly Rates of Growth		
								67-70	70-73	67-73
Refrigerators	385	503	539	525	680	829	1029	10.9	25.1	17.8
Air conditioners	32	35	64	59	101	110	152	22.6	37.1	29.7
TVs	467	678	746	816	958	1109	1345	20.4	18.1	19.3
Radios	884	1227	1547	1942	2238	2893	2777	30.0	12.7	21.0
Floor-Waxing Machines	175	179	244	221	240	297	329	8.1	14.2	11.1
Electric Fans	118	100	171	157	220	225	389	10.0	35.3	22.0
Hovers	42	71	57	54	74	89	99	8.7	22.4	15.4
Electric Mixers	93	123	103	109	127	138	167	5.4	15.3	10.2
Exhausts	17	25	25	23	36	34	39	10.6	19.2	14.8
Blenders	337	381	424	443	554	642	744	9.5	18.9	14.1
Flat Irons	242	274	282	302	354	433	545	7.7	21.7	14.5
Automobiles	132	161	237	250	342	409	451	23.7	21.7	22.7
Vans	62	71	70	124	131	148	207	26.2	18.7	22.4

Source: Galveas (1985: 126-7).

Table VII.6.1. Asset rates (%)

	Non-indexed assets[1]								Indexed rates[1]			
Year	Discount rates		Time deposits Banks[2]		Treasury Bills (LTN)		Bills of Exchange		Savings deposits[2]		Treasury Bonds (ORTN)	
	(1)		(2)		(3)		(4)		(5)		(6)	
	N	R	N	R	N	R	N	R	N	R	N	R
1964	8.0	-43.4	3.4	-45.8	n.a.	n.a.	43.9	-28.7	67.7	-12.1	n.a.	n.a.
1965	10.0	-30.0	2.0	-35.1	n.a.	n.a.	36.0	-13.4	43.6	-8.6	69.0	7.6
1966	12.0	-19.1	1.9	-26.4	n.a.	n.a.	30.4	-5.0	42.1	2.7	45.2	4.9
1967	17.0	-9.0	1.7	-20.9	n.a.	n.a.	31.3	2.1	29.6	0.8	29.2	0.5
1968	22.0	-1.8	3.7	-16.5	n.a.	n.a.	29.6	4.4	29.6	4.4	31.0	5.5
1969	21.0	0.7	4.3	-13.2	n.a.	n.a.	28.4	6.9	26.0	4.9	24.5	3.7
1970	20.0	0.2	24.3	3.8	n.a.	n.a.	28.8	7.5	26.9	5.9	25.6	4.9
1971	20.0	0.0	24.3	3.6	18.0	-1.7	28.0	6.6	27.6	6.3	28.7	7.2
1972	20.0	2.3	24.0	5.7	15.9	-1.2	24.2	5.8	20.8	3.0	21.3	3.4
1973	19.0	3.6	21.0	5.3	13.9	-0.9	22.0	6.2	26.2	9.8	18.8	3.4

Sources: col. 1: Goldsmith, 1986, p. 417; col. 2: Banco Central do Brasil, Monthly Bulletin, 13(3), March 1977, pp. 96-7; cols. 3-6: Banco Central do Brasil, op. cit., pp. 96-97.

Notes: (1) real rates deflated by the general price index (IGP-DI) as in Table VI.1; (2) data for the savings deposits in the federal savings bank (Caixa Econômica Federal); (2) rates paid on time deposits by banks and associated investment banks. Abbreviations: N = nominal; R= real rates.

194

Table VII.6.2. Loan rates and spreads between lending and borrowing rates (%)[1]

Year	Working capital		Desconto de Duplicatas (discounts of bonds)		Resolution 63		Subsidised loans to small and medium enterprises		Finance companies[2]		Spreads[3]	
	N	R	N	R	N	R	N	R	N	R	Banks	Finance cos.
1964	30.5	-31.6	...	...	n.a.	n.a.	n.a.	n.a.	81.2	-5.0	26.2	25.9
1965	33.3	-15.1	...	...	n.a.	n.a.	n.a.	n.a.	19.0	-24.2	30.7	-12.5
1966	34.7	-2.7	...	...	n.a.	n.a.	n.a.	n.a.	71.5	23.9	32.2	31.5
1967	34.9	4.9	...	...	40.2	9.0	n.a.	n.a.	60.3	24.7	32.6	22.1
1968	34.1	8.0	...	...	60.2	29.0	n.a.	n.a.	56.4	25.9	29.3	20.7
1969	33.7	11.3	...	...	34.2	11.7	n.a.	n.a.	53.2	27.5	28.2	19.3
1970	30.9	9.3	...	...	30.7	9.1	n.a.	n.a.	54.5	29.0	5.3	20.0
1971	31.0	9.1	...	...	46.5	22.1	n.a.	n.a.	53.6	28.0	5.4	20.0
1972	32.0	12.5	...	...	32.4	12.9	n.a.	n.a.	49.0	27.0	6.5	20.0
1973	34.0	16.6	28.4	11.7	34.6	17.1	21.7	5.9	44.6	25.8	10.7	18.5

Sources: col.1-3: Banco Central do Brasil, Monthly Bulletin, 12(4), April 1976.   col. 4: Revista Cenarios, October, 1987, p. 50 [resolution 63 loan rates were estimated from 1971 to 1972 using nominal LIBOR rate (r_L), the rate of change of the implicit exchange rates (e), the rate of inflation in Brazil (p) and the average of the spreads from 1967 to 1970 (s) and the following formula $r_{63} = \{(1+r_L).(1+p).(1+e).(1+s)\}-1$; col. 5: from 1964 to 1966 - Christoffersen, 1968, p.50; from 1967 onwards, Banco Central do Brasil, op. cit.

Notes: (1) real rates obtained by deflating nominal rates by the general price index (IGP-DI); (2) until 1970 loans to working capital; from then on, consumer credit rates; (3) obtained as follows: $r = ((1+r_l)/(1+r_d))-1$ where r_l stands for the loan rate and r_d, for the deposit rate.

Table VII.7 - Sources of expansion and contraction of the monetary liabilities of the monetary authorities (CR$ billion)

Account/Year	1967	1968	1969	1970	1971	1972	1973
1. Assets	1.8	6.1	7.6	4.4	8.2	14.8	26.4
Treasury Operation	0.6	1.1	-0.7	-1.7	-1.8	-7.7	-5.3
Exchange Currency Operations	-0.1	1.6	4.5	2.5	2.2	1.4	1.5
Banco do Brasil (loans)	1.1	2.4	3.1	3.2	5.7	7.1	12.1
Rediscounts and Loans to Fin. Institutions	0.1	0.8	0.5	0.1	1.3	1.7	3.0
Buy/Sell of Agricultural Products	0.1	0.3	0.3	0.3	0.9	-0.7	1.9
2. Liabilities	-0.1	-2.4	-4.2	-1.6	-2.1	-10.4	-13.3
Operations with Coffee	-0.1	-0.9	-1.4	-1.2	-0.5	-0.4	0.2
Capital and Reserves of the Mon.Authorities	-0.4	-1.1	-1.6	-3.0	-3.7	-0.6	-0.6
Other	+0.4	-0.4	-1.2	2.6	+2.0	-0.4	-7.9
3. Monetary Base	1.7	3.7	3.4	2.8	6.1	4.4	13.1

Source: Pereira, 1974: 86. Note: (+) Expansionary Effect on the Monetary Base; (-) Contraction effect. Therefore an increase in the liabilities will have a negative sign in the table above (e.g. in 1967 the account "Operations with Coffee" had a surplus of Cr$ 151 million).

196

Table VII.8.1. Macroeconomic indicators of growth, inflation and the external sector (1947-83)

YEAR	GROWTH (annual real rate, %)				INFLATION (annual rate, %)		EXTERNAL SECTOR (%)			
	GNP	per capita GNP	Industry	Agriculture	GNP deflator	WPI [1]	Imports/GNP[2]	Exports/GNP[2]	Debt/GNP[2]	Debt/Exports
					(5)					
	(1)	(2)	(3)	(4)		(6)	(7)	(8)	(9)	(10)
1962-66	5.0	1.0	4.9	4.4	82.5	81.9	4.5	5.4	15.7	291.8
1967-73	11.2	8.5	13.5	4.9	20.9	19.4	6.0	6.1	12.8	208.3
1966	6.7	3.4	11.7	-3.2	37.9	38.5	4.5	6.1	18.1	298.4
1967	4.2	1.0	3.0	5.7	26.5	28.6	4.5	5.1	10.5	203.9
1968	9.8	7.2	15.5	1.4	26.7	24.2	5.2	5.3	10.6	201.0
1969	9.5	6.9	12.1	3.8	20.1	20.1	5.2	6.1	11.6	190.5
1970	10.3	7.7	10.4	10.3	16.4	19.8	5.5	6.0	11.6	193.3
1971	11.3	8.6	11.8	10.2	20.4	20.0	6.5	5.8	13.3	228.0
1972	12.1	9.4	14.2	4.0	19.4	17.3	7.2	6.7	16.1	238.6
1973	14.0	11.2	17.0	0.0	22.6	14.9	7.8	7.8	15.8	202.8

Sources of Raw Data:
cols. 1, 2, 3, 4, 6, 7, 8, 9 and 10: as in Table V.1. col. 5: IBGE, 1987, p. 111; col. 6: idem, pp. 189-193; cols. 7-8: idem, pp. 536-537; col. 9-10: idem, p. 543.

Table VII.8.2. Investment indicators (1966-73)

Year	TOTAL INVESTMENT [1]		PRIVATE INVESTMENT		GOVERNMENT INVESTMENT [3]	
	% of GNP (1)	real growth[2], % (2)	% of total investment (3)	real growth[2], % (4)	% of total investment (5)	real growth [2], % (6)
1962-66	17.4	6.6	34.5	12.6	65.5	15.0
1967-73	20.4	14.5	42.5	14.3	57.5	21.2
1966	18.4	6.8	42.0	41.9	58.0	11.9
1967	16.3	-8.1	46.9	2.7	53.1	-15.8
1968	19.0	28.1	38.0	3.8	62.0	49.6
1969	22.0	27.0	44.0	47.0	56.0	14.7
1970	20.5	1.5	44.1	3.1	55.9	2.7
1971	21.1	15.3	42.5	11.2	57.5	18.6
1972	21.1	16.7	43.5	19.5	56.5	14.7
1973	23.2	21.0	38.3	6.5	61.7	32.1

Sources of Raw Data: as in table V.1

Notes: (1) total investment includes changes in inventories; (2) from 1966 to 1969 real total investment was obtained by deflating nominal valued by GNP implicit deflator (from table VI.1, col. 5); data for 1970-83 obtained from IBGE, p.126; (3) includes investment of government-owned enterprises; (4) simple average of the period.

Table VII.8.3. - Indicators of sectoral growth (1967-73)

	1967-70	1970-73	1967-73
GNP	9.9	12.4	11.2
Industry	12.6	14.3	13.5
Consumer Durables	21.7	25.5	23.6
Non Durables	9.8	9.1	9.4
Capital Goods	13.5	22.7	18.1
Construction	9.8	12.0	10.9

Source: Table VII.8.1, col. 1 and Serra (1982), p. 58.

199

Table VII.9. Some indicators of the use of external funds to finance internal accumulation

Year	Current Account[1]							Capital inflows[1]					Res[1]	Indexes				Total debt
	RRT	Cost of capital				TOTAL	Transfers	Financial flows				Total		RRT/GNP	RRT/CI	CC/CI	Res/CI	
		Interest	Amort.	π & div.	Total			FDI	MLT	ST	Other							
1964	0.22	-0.13	-0.28	0.00	-0.41	-0.19	0.06	0.03	0.22	0.06	-0.06	0.31	-0.11	-4.4	-0.7	1.3	0.37	3.87
1965	0.47	-0.16	-0.30	-0.02	-0.48	-0.01	0.08	0.07	0.36	-0.18	0.08	0.41	-0.40	-9.2	-1.1	1.2	0.97	4.76
1966	0.17	-0.16	-0.35	-0.04	-0.55	-0.38	0.08	0.07	0.51	-0.04	-0.12	0.49	-0.12	-3.2	-0.3	1.1	0.24	5.20
1967	-0.06	-0.18	-0.44	-0.07	-0.70	-0.76	0.08	0.08	0.53	-0.01	-0.20	0.47	0.29	1.1	0.1	1.5	-0.61	3.28
1968	-0.30	-0.14	-0.48	-0.08	-0.71	-1.01	0.02	0.06	0.58	0.00	0.37	1.03	-0.02	4.5	0.3	0.7	0.02	3.78
1969	-0.05	-0.18	-0.49	-0.08	-0.76	-0.81	0.03	0.18	1.02	0.18	-0.06	1.35	-0.55	0.6	0.0	0.6	0.41	4.40
1970	-0.23	-0.23	-0.67	-0.12	-1.03	-1.26	0.02	0.13	1.43	0.08	-0.03	1.63	-0.38	2.4	0.1	0.6	0.23	5.30
1971	-0.90	-0.30	-0.85	-0.12	-1.27	-2.17	0.01	0.17	2.04	0.49	-0.05	2.65	-0.48	8.6	0.3	0.5	0.18	6.62
1972	-0.97	-0.36	-1.20	-0.16	-1.72	-2.70	0.01	0.32	4.30	0.02	0.42	5.07	-2.37	7.8	0.2	0.3	0.47	9.52
1973	-1.00	-0.51	-1.67	-0.20	-2.38	-3.39	0.03	0.94	4.50	-0.20	0.27	5.53	-2.15	5.4	0.2	0.4	0.39	12.57

Source: Balance of Payments data: IBGE, 1985, pp. 539; external debt: idem, 543-4.

Notes: (1) in billion current dollars.

Abbreviations: RRT = real resources transfers, which includes trade balance and net payments of non-factors; π & div. = profits and dividends (net); FDI = foreign direct investment (net); MLT = medium and long-term loans; ST = short-term loans; CI = capital inflows; CC = capital costs; Res = changes in the international reserves held by the central bank.

200

VIII. FROM THE ECONOMIC 'MIRACLE' TO THE LOST DECADE: THE ROLE OF THE FINANCIAL SYSTEM IN BRAZIL'S IMBALANCED GROWTH IN THE 1970s

VIII.1. Introduction

The year 1973 marks a new phase in Brazil's development, a phase in which the country had to face severe internal and external challenges to the continuance of its growth. On the internal front, the economy showed signs of the exhaustion of the boom begun in 1967, as industrial output reached full capacity, inflation began to rise and the demand for capital goods soared. On the external front, the four-fold increase in international oil prices caused a significant balance of payments problem, in an economy where 80% of the oil needs were imported.

Two options were available to the Brazilian government then. One was to promote a severe adjustment programme in order to re-establish external equilibrium. This would almost inevitably cause a severe recession, which was not politically bearable by the military government, as its was preparing for a transition to a civilian political system and wanted to guarantee that in this transition its political party (ARENA) remained in power. The second option, which was taken, was to deepen the process of import substitution so as to rapidly reduce Brazil's dependency on foreign resources. It implied heavy investment in technologically advanced basic input sectors and in the production of internally generated energy. This option took the form of the Second National Development Plan (the 1974 Plan hereafter), which raised the accumulation of the economy to levels which were unprecedented in Brazil's economic history.

In the implementation of the 1974 Plan, the government was split into two different (but not politically exclusive) orientations: one, led by the President and the Ministry of Planning was strongly interventionist view. The other, led by the Finance Ministry, continued to espouse the liberal approach to monetary policy and also favoured the maintenance of positive real interest rates in order to promote internal

saving, to attract foreign saving and to maintain internal price stability. Given the inherited segmented financial structure, which had already shown inherent dysfunctionalities in 1973 (see chapter VII), the tension between these two approaches precipitated an environment in which capital gains could be obtained by speculating with government bonds and other indexed and non-indexed assets. As the public debt soared, and inflation rose, both the private financial sector and the big corporate sector engaged in such speculation. The result of such a perverse process was a financial disarray which much contributed to the main macroeconomic imbalances of the period - that is high public and external debts, increasing inflation and menacing financial fragility. Ultimately, the financial trap in which the government led itself, left no choice but to step back in 1979 and to promote one of the stiffest recessions the country had ever experimented.

This chapter analyses in detail the evolution of the events which led Brazil from the economic 'miracle' in the 1970s to the lost decade in the 1980s. The emphasis is placed on the interrelation between (i) the macroeconomic imbalances of the period and (ii) the legacy of the financial reforms of 1964-66 and the monetary policies from the mid-1970s onwards. The chapter is divided into five sections. Section VII.2 discusses the main macroeconomic trends in the period, focusing on the pace of growth and the levels of accumulation. Section VIII.3 discusses the arrangements created to finance accumulation in the Second National Development Plan (1974-78). Section VIII.4 discusses the limits of the above mentioned arrangements and the inconsistencies of the economic policies undertaken in the period, given the inherited financial structure. Section VIII.6 summarises the findings and presents the conclusions of the chapter.

VIII.2.1. The internal and the external constraints to growth in 1973 and the political choice of 1974

After six years of demand-led economic boom, in 1973 Brazil's economic growth became increasingly threatened by both internal and external factors. The internal factors were three: first, the industrial sector was already facing full-capacity[1] with the demand for basic inputs and capital goods growing in average 22.7% yearly since 1970s (see Batista, 1987: 4). Second, the indigenous capital goods sector was not sophisticated enough to provide the more technologically advanced investment goods required by this phase of growth. Third, the capacity of expansion of the industrial sector was limited by the size of the market for consumer durables, especially after the rapid growth of their demand in the previous period.[2]

As regards the external factors, the capacity to expand exports was limited by the recession in world trade (which began in 1974 and lasted until the first quarter of 1975). The need to do something about the external constraint was already clear in the three last years of the economic 'miracle': the imports of raw material from 1971 to 1973 had more than doubled; the demand for imported capital goods had expanded in average 24.7% between 1970 and 1973, despite the fact that domestic production rose rapidly. In addition, in 1973 this situation was aggravated by the first oil shock.

---

[1] See Figure 1. In this figure, the data on utilisation of productive capacity in the industrial sector (CU) was obtained from Serra (1982: 102). We estimated the level of potential output in the period from 1964 to 1973 by applying the average capital output ratio (COR) to the series of capital stock. From 1974 on, because of the investments in capital-intensive sectors of the 1974 Plan, we assume that the COR is rising at geometric average rate, so that CU was estimated as follows

$$CU_{1974+t} = (COR_{1984} / COR_{1980})^{1/4} \cdot CU_{1974}$$

Needless to say, this is a rough estimate; but it is nonetheless consistent with other data on the path of growth in industrial output and investment.

[2] It is important to remember that the previous consumerist boom was based on the demand of the relatively small middle and upper-classes (see chapter VII). Because the income distribution was so poor and because it was not improved in the period of the 'miracle' (1967-73) the demand for these goods was inversely related to the stock of consumer durables already sold. This is a dynamic problem in any demand-led growth, which could only be solved by widening the market for consumption goods, as the Taylorist mass-consumption model.

203

Figure VIII.1 - The resumption of investment in the 1970s and the use of productive capacity
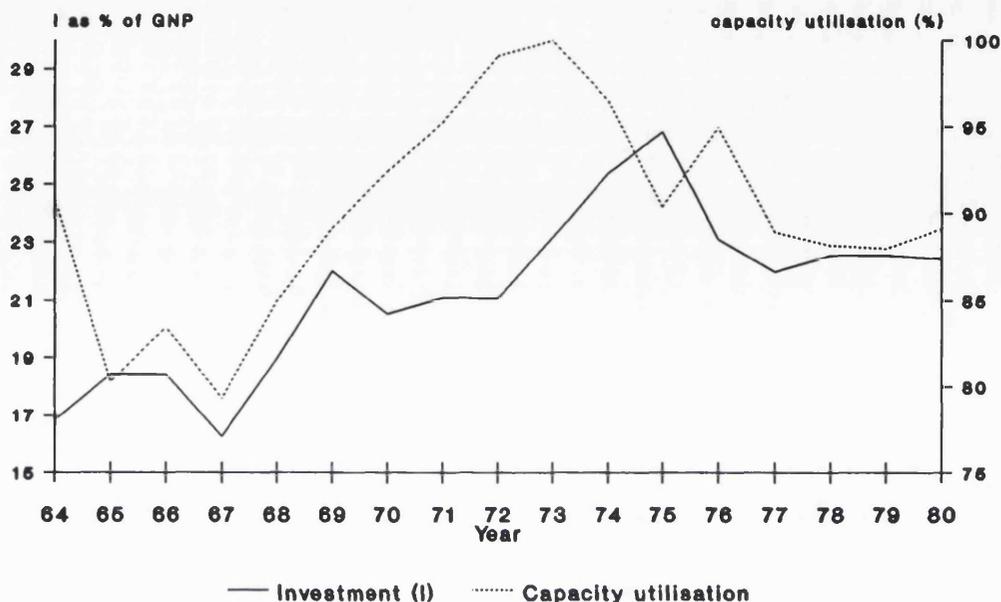
Source: Table VIII. 1 and Serra, 1982,
p. 102, see text for the method of
estimation of UC.

Oil being the main source of energy in the industrial and transport sectors and given that Brazil imported 80% of its oil needs, the oil price shock represented a main source of disequilibrium in the trade balance.

Despite these constraints, in September 1974 the government launched its Second National Development Plan. This was a clear choice for growth and, further, to deepen the process of import-substitution from what was built in the 1950s. The choice for growth rather than conventional adjustment was - as it usually is - politically bounded. As Wells (1979) points out,

> [the] economic measures adopted during 1974 and afterwards need to be interpreted in the light of the President [Geisel]'s commitment, at least during the first half of the administration, to a series of steps leading to political democratisation: relatively free congressional elections (in 1974) and municipal election (in 1976) leading up to direct election for the state governorships in 1978... In order to try to insure that ARENA (the government party) was the main beneficiary of the electoral process, the government felt the need to sustain growth and was obliged to adopt certain measures of income redistribution.

Indeed the orthodox alternative - that is, an attempt to equilibrate the external

imbalances (caused by the rise of oil prices) and reduce inflation (through exchange devaluation and orthodox monetary and fiscal policies) - would be tremendously costly in terms of output and employment. Further, this would not cause a significant reversal of the trade deficit because of the low elasticity of the world demand for Brazil's exports caused by the international crisis and the inelasticity of the internal demand for oil (see Fishlow, 1986; Castro and Souza, 1982 and Batista, 1986).

The political solution was then the Second National Development Plan. The stated objectives of the Plan were very ambitious:

(1) to maintain a 10% economic growth in the period between 1974 and 1979;

(2) to produce a rapid import substitution in the capital goods and basic inputs sector (heavy chemicals, iron and steel, ferrous and non-ferrous minerals);

(3) to expand rapidly the production and export of cellulose, iron, aluminium and steel;

(4) to develop infrastructure, specifically: to increase rapidly the domestic production of oil and hydro-electric energy; to develop the railway and telecommunication systems; to implement a vast program of rural electrification, irrigation, agricultural goods warehouses etc.

For this the plan projected an accumulation ratio (investment/GNP) of 25% in the four years of its implementation. Of the total projected investment in the period 1974/78, 22.8% would concentrate in the manufacturing sector (18.3% specifically in the basic inputs sector); 15.0% in the production of electricity (including both the expansion of hydroelectric power and the installation of nuclear power stations).

The macroeconomic consequences of the 1974 Plan are analysed next.

VIII.2.2. Macroeconomic performance in the period

Despite the aforementioned constraints on growth, Brazil's macroeconomic performance in the period from 1974 to 1980 was surprisingly satisfactory (Table VIII.1), albeit nothing compared to the period from 1967 to 1973. For instance, Table VIII.1 shows that real GNP grew 6.8%, and per capita GNP 4.2% on average, from 1974 to 1980. This growth was again led by the industrial sector, which expanded 7.0% on average in the period.

Figure VIII.2 - GNP and industrial growth: a comparison between the periods 1947-61 and 1967-79
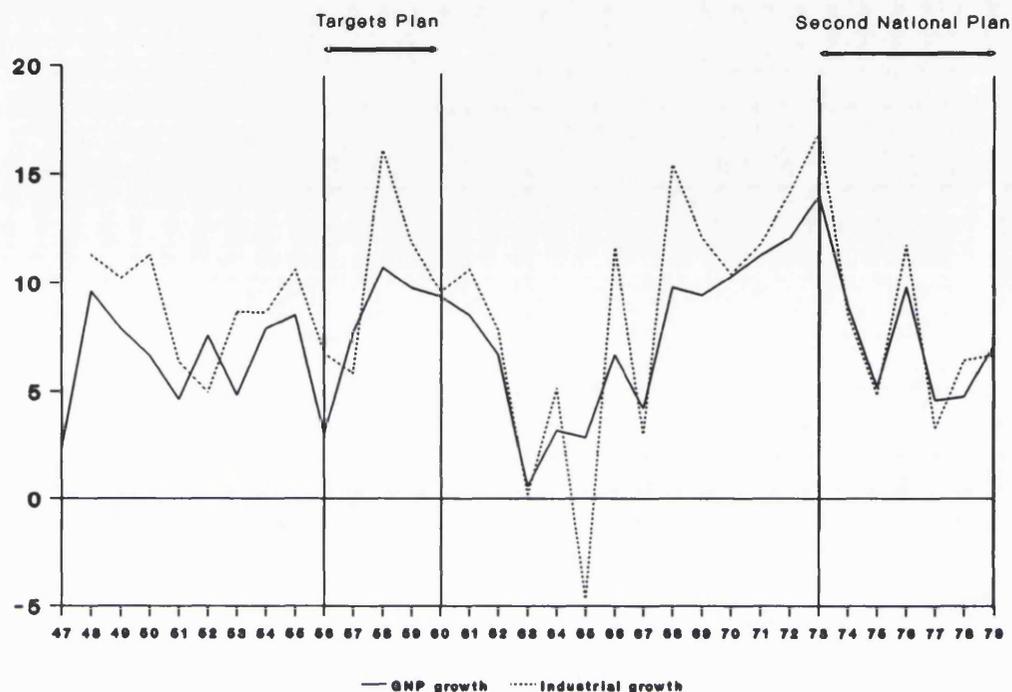
Source: Table VIII.1.

In a way, when the Second National Development Plan was launched, the process of accumulation in fixed capital had already taken off. The novelty introduced by this plan (in relation to the more *laissez-faire* approach thus far adopted by the military government) was the State's direct commitment to take the lead the new phase of import-substitution, either through direct massive public investment and as a financier of the process. Indeed it is an irony that in the military government, which always pictured itself as the champion of liberalism, the role of government investment is high even in comparison with the period of the 'populist' Target Plan (see Figure VIII.3).

The strategy behind the 1974 Plan was successful in maintaining a high growth and accumulation rates. The plan also produced a considerable increase in production of capital goods, metallurgy and chemicals. As regards the import substitution and export promotion, the import coefficient in the capital goods sector declined from 28.8% in 1974 to 18.0% in 1979, whereas the export coefficient rose from 5.3% to 12.1% in the same period. Similar results are found in the production of basic inputs.

206

Figure VIII.3 - The rate of accumulation between 1947 and 1979: investment over GNP (%)
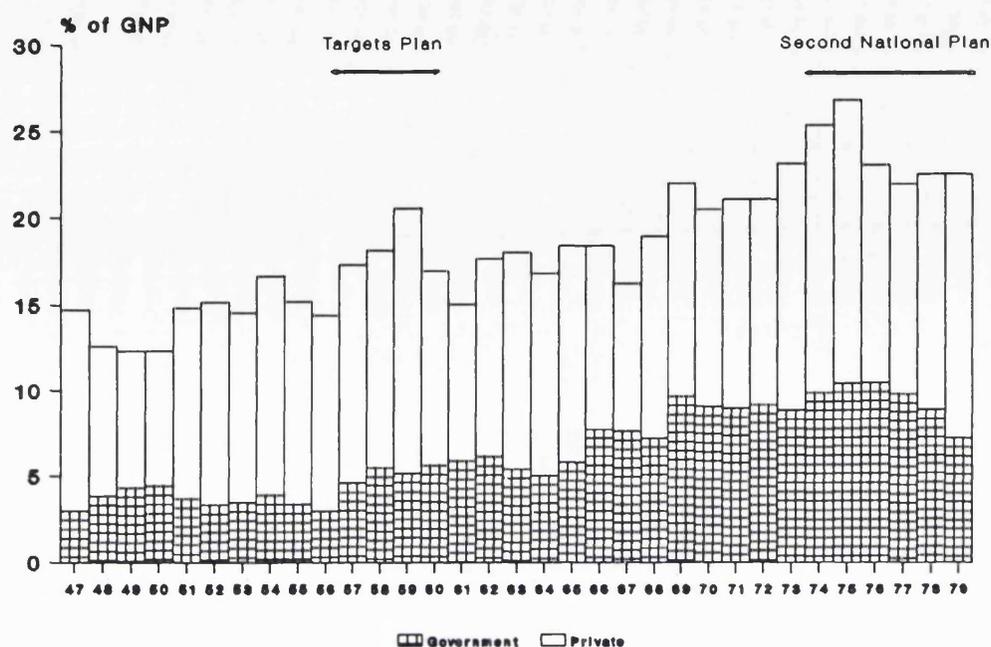
Source: Table VIII.2.

The plan also produced a significant structural change within the productive (especially industrial) sector, as it reduced the dependency of Brazil's growth on imports of capital goods and basic inputs by promoting import substitution in important industrial sectors and expanded the productive capacity of tradable goods (Table VIII.3).[3]

If the 1974 Plan represented a successful development strategy, other indicators show that the economy was riding fast into macroeconomic and financial deterioration. On the one hand, despite the rise of investment, GNP growth fell from 8.8 % (1976) to 4.6% in 1977 and 4.8% in 1978. This decline was especially severe in the manufacturing and agriculture sectors (see Table VIII.1). On the other hand, inflation doubled from 1973 (22.6%) to 1977 (46.2%), declining only slightly in 1977 (38.7%). Finally, the external debt rose from US$ 17 billion to US$ 43.5 billion from 1973 to 1978. It is common to blame the external shocks for such imbalances. In contrast, and without neglecting the destabilising effects of such shocks, we maintain that the financial structure inherited from the reforms of 1964 to 1966 and the neo-

---

[3] For more detailed data, see Castro and Souza (1982) and Batista (1986).

classical monetary policies in the mid-1970s are responsible for much of these macroeconomic imbalance. But before this link is further explored, it remains to conclude the story told in this section with a brief analysis of the crisis begun in 1981.

VIII.2.3. The crisis

In 1979, government was facing severe pressures from industrial sectors to accelerate growth, whereas its external debtors were pressing for the implementation of orthodox adjustment programs. The reason for these pressures are rather straightforward: on the industrialists' side, the period of rapid accumulation (1974-79)

Figure VIII.4 - Brazil's rapidly rising mountain of foreign debt

US$ billion

Year
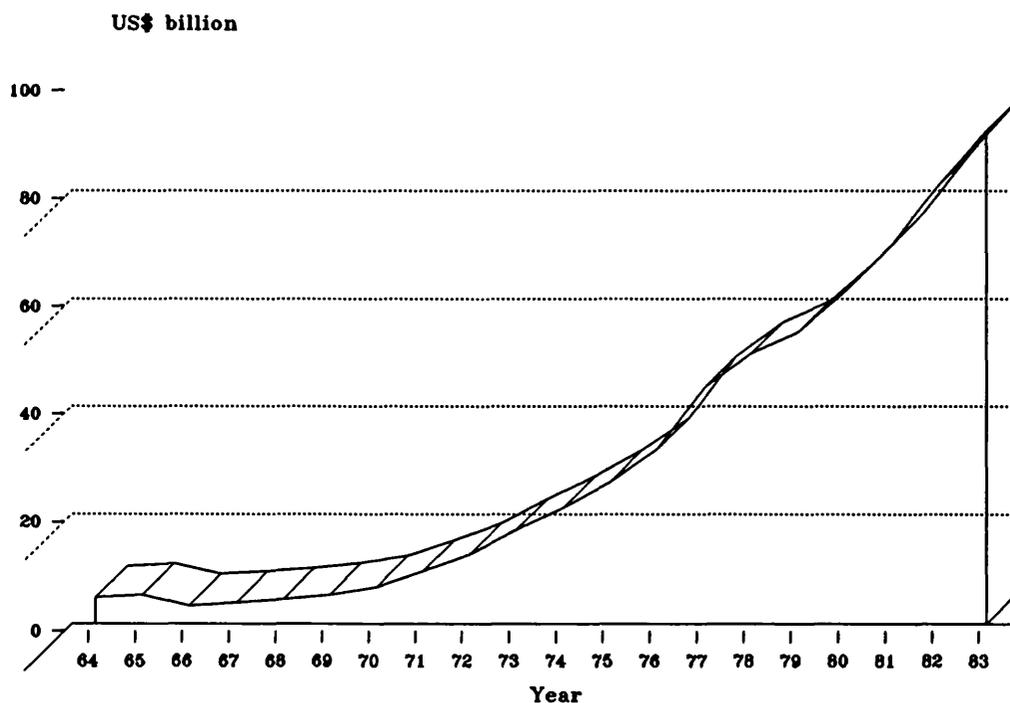
Source: Table VIII.9.

had provided them with enhanced productive capacity, which they were anxious to

use, if only to repay the debts obtained to finance their previous accumulation.[4] On the foreign debtors' side, the simple fact that the debt had risen to almost US$ 50 billion and 327.4% of the exports (see Table VIII.1) was a matter of concern.

After two years when GNP growth fell consecutively, a change of government brought the man identified as the mentor of the economic 'miracle' (1967-73) back to power. Reversing the stop-go policy of his predecessor (Mario Henrique Simonsen), Delfim Netto promised in his inaugural speech to reproduce the 1967-73 economic boom. Delfim Netto's policy mixed orthodox with heterodox measures (Serra, 1982: 116-8): the former included a 'corrective inflation' of prices of basic inputs and services produced by public enterprises, and a 30% exchange devaluation. The latter involved selective price controls, ceiling on the interest rates (which had been freely determined since 1976) and the pre-fixation of the monetary correction and exchange rates (breaking the rule, which had been followed for 12 years, of mini-devaluations according to the internal inflation and the inflation in the United States).

These measures caused significant impacts on both the real and the financial side of the economy. To start with, the pre-fixed rates - of 40% for monetary correction and 45% for the exchange rate - were below any expected rate of inflation (55.6% in 1979). The combination of cheap money, low rate of return on government bonds, over-valued currency and optimistic entrepreneurial expectations, provoked a speculative boom in the demand of basic inputs. Thus, whereas the internal demand for basic inputs is one of the main responsible for the growth in the manufacturing in 1979 (see Table VIII.4), the speculative boom in demand for imported basic inputs represented an increase of those imports from US$ 4.5 billion to US$ 7.0 billion in 1980, adding to the already deteriorated trade balance (see Table VIII.5).

Contrary to the expectations of Delfim Netto, inflation proved persistent and, in fact, increased from 38.9% to 91.8% in the period from 1980 to 1981 (see Table VIII.1). On the external front, two factors were added to the speculative demand for basic inputs to provoke a fast deterioration of the balance of payments. First, the oil

---

[4] The increase of indebtedness was a characteristic of the period of the implementation of the 1974 Plan. This was expected in the light of the approach so far embraced: that is, in economies with credit-based system an increase of accumulation tends to be closely linked to the debt of the corporate sector. The growth of such indebtedness and its consequences for the financial instability of Brazil's economy after the 1974 Plan will be analysed in section VIII.4 below.

209

prices more than doubled (110% growth from June 1979 to February 1980) and the terms of trade continued to fall since the deterioration begun in 1976. Second, the international interest rates rose substantially in the period - e.g. the average LIBOR rate increased steadily from 6.43% in 1977 to 13.99% in 1980; deflated by the index of Brazil's terms of trade, this meant an increase in the real rates from -6.07% in 1977 to 33.31% in 1980 (see Table VIII.6).

Already in the first semester of 1980, the government surrendered to the pressures for orthodox adjustment policies. Delfim Netto introduced strong quantitative ceilings on the expansion of bank credit and consumer credit; freed the rates of interest and (partially) prices from the government's monitoring; reduced investment of both the federal government and public enterprises; reduced government expenditures and subsidies; limited the readjustment of wages (causing decline in the real wages); and increased the corporate income tax.

These measures provoked a reversal of the entrepreneurial expectations, causing a decline in industrial output (-8.2%) and in the real GNP (-3.4%). The violence of the decline in the manufacturing industry has also to do with the speculative character of the recovery in 1979-80. In that period, as noted above, the firms rapidly increased their inventories of intermediary goods. Once the rate of interest rose and the expectations became gloomier, firms reduced their demand for basic inputs symmetrically to the expansion in the previous two years (see Table VIII.5 above).

The combination of high interest rates and recession increased financial instability. This instability did not become a crisis because of the process of intensive financial restructuring that the private corporate sector engaged in and the generous financial assistance that the Central Bank provided to financial institutions in trouble. The cost of guaranteeing financial stability was high, as fragility was absorbed by the public sector in the form of a soaring public debt - both of the Treasury and of the public enterprises.[5] Before a detailed analysis of such process is undertaken, a discussion of the reasons behind the failure of the financial strategy in the Second National Development Plan is in order.

---

[5] An old formula of the Latin American liberalism was put into practice: to privatise the profits and socialise the losses.

VIII.3. The financial strategy of the Second National Development Plan and its inconsistencies

In order to address the problems behind the financial strategy of the Second National Development Plan, one has to remember the (interrelated) limits imposed by the inherited financial structure. First, the financial system lacked private long term financing, because of the 1964-5 reform's failure to develop investment banks and capital markets oriented towards long-term finance. With the coexistence of indexed and non-indexed assets and the process of financial conglomeration, financial system became the inherently speculative. Third, the links between the international banking system and the national private sector had been enhanced. Nonetheless, these links did not increase the supply of long-term funds when they were intermediated through the private banking system (through resolution 63), as they were split into loans of smaller maturities to finance firms' working capital. In turn, during the whole period of 1967 to 1973 the rise of the external debt did not increase the transfer of real resources from abroad, but was largely used to pay the increasing costs of foreign capital and to accumulate idle international reserves.

Given these structural limits of the mechanisms to finance accumulation, and political will to grow and to deepen the process of import substitution, it is understandable that the government had to find alternative or compensating structures to do the job. These will be examined below, so that their weaknesses can be addressed next.

VIII.3.1. Investment Finance

Public Funds

The need for a rapid increase of supply of finance to new investment projects was evident from the projections made by the 1974 Plan (see section VIII.2.1 above), as all the investment projects were highly capital-intensive and had a long horizon of maturation. Given the failure in 1964 to 1973 to develop a long-term-oriented capital markets, the impatience of the more interventionist sector within the government was

growing. The solution found was similar to the one which existed before the reforms: to transfer public funds to finance investment. However, because of the 'liberal' orientation of the military government, these funds were directed to the private sector, and not to public enterprises as before. Take the case of the National Development Bank (BNDE).

The increase of BNDE's loans to the private sector took place through the creation of several specialised programs which were created in the Bank's restructuring after the reforms of 1964-66. Already in 1966, the Fund for the Financing of Industrial Machines and Equipment (FINAME), created previously to finance the acquisition of internally produced capital goods by national producers, was transformed in a mixed-economy joint-stock company (with BNDE as the principal shareholder). Five other funds were also created within BNDE, namely, the Fund for Technical and Scientific Development (FIPEME); a fund responsible for viability studies (FUNTEC); the Fund for Industrial Modernisation and Reorganisation (FMRI); the FUNGIRO, for financing of medium and long term industrial working capital. In 1974 two subsidiaries of the BNDE system were created: *Mecânica Brasileira S/A* (EMBRAMEC) and *Insumos Básicos S/A* (FIBASE), respectively to support investment in the machine tools and basic inputs sectors. In the same year, another subsidiary (IBRASA) (*Investimentos Brasileiros S/A*) was founded with the aim of promoting financial strengthening and underwriting of the issues of national private companies.

Even though the number of programs to finance the private sector increased, until 1973 BNDE's loans had not significantly risen if compared to the needs of investment (see Figure VIII.5). However, in 1974, two important funds, initially under the administration of the National Housing Bank, were transferred to BNDE: the Program of Social Integration (PIS) and the Public Employees Financial Reserve (PASEP). The former (PIS) was created in 1970 as a form of pension, based on the amount of tax paid and revenues from sales; the latter (PASEP) is similar to PIS for the civil servants. These funds by themselves represented an enhancement of 0.6, 3.1 and 3.3 billion of dollars in BNDE's funding respectively in 1974, 1975 and 1976 (in other words, respectively in 1975 and 1976 24.5% and 33.2% of the Bank's liabilities).

Figure VIII.5 - BNDE's loans as percentage of total investment

% of total investment
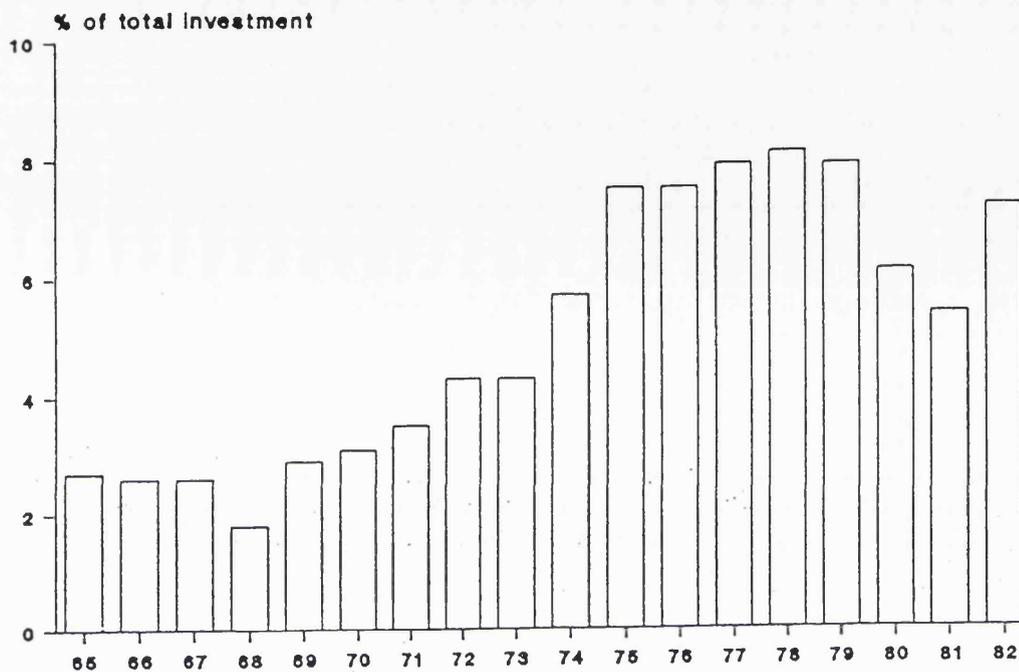
Figure VIII.6 - Transfer of fiscal funds and compulsory savings (PIS-PASEP) as percentage of the sources of funds of BNDE

% of total funds intermediated by BNDES.

Fiscal funds   PIS/PASEP

213
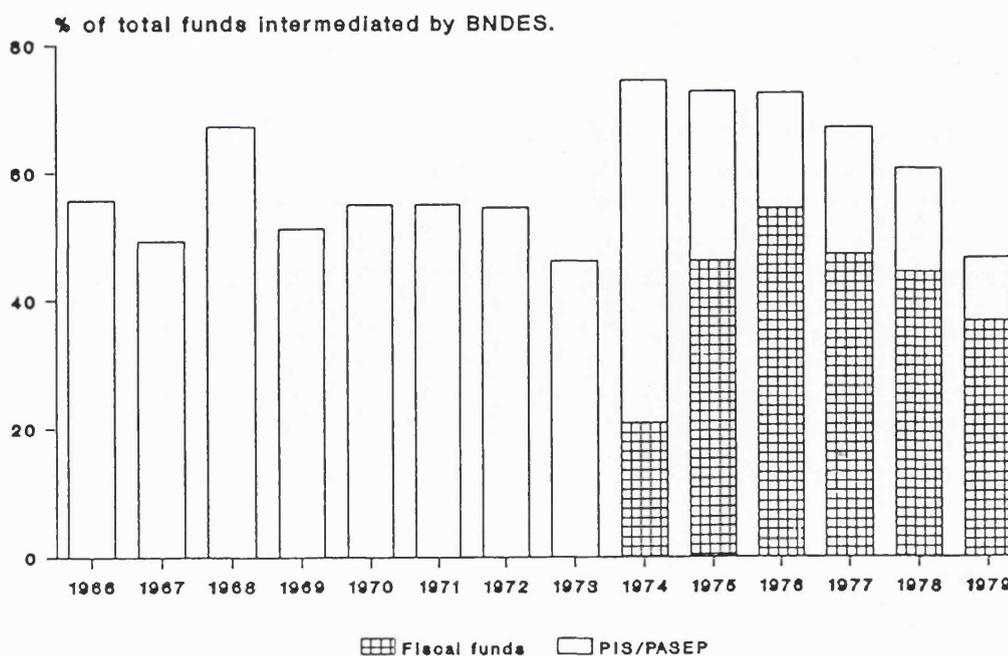
Using these and other subsidised funds, BNDE rapidly restored its position as the centre of a system of long-term financing. In addition the orientation of its funds to finance private investment, another novelty (in relation to the system previous to the 1964-5 reforms) was the fact that it used private financial institutions (investment banks, commercial banks and finance companies) as 'intermediaries' of its loans.

Figure VIII.7 - BNDE's loans to the private sector

% of BNDE's total loans
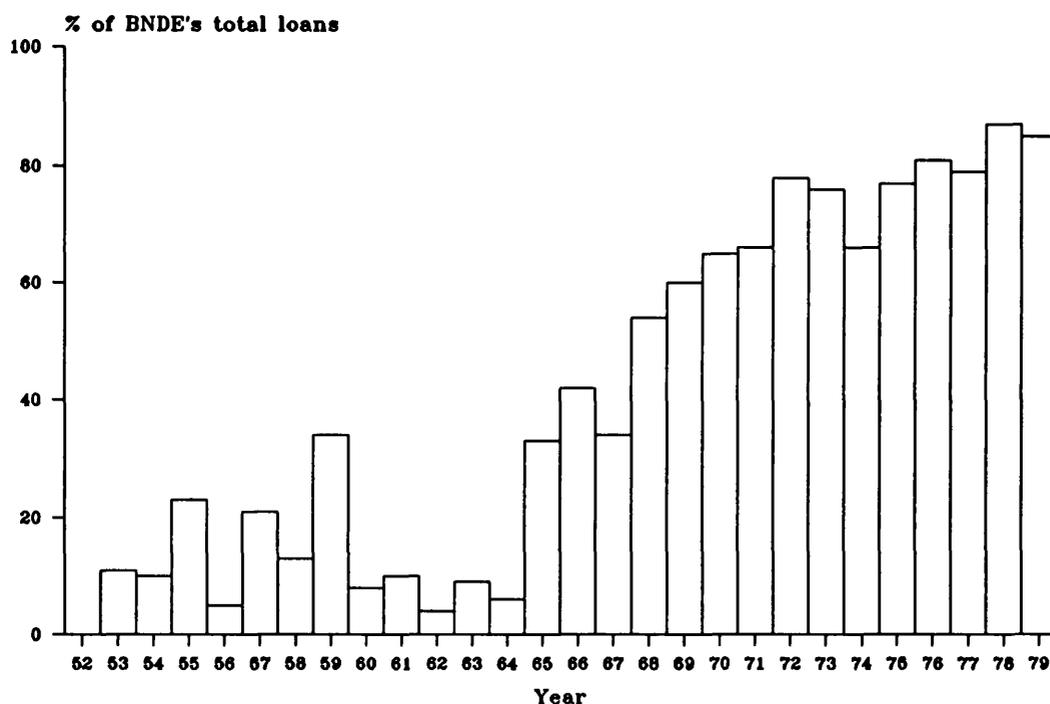
To sum up, the expansion of long-term industrial finance in Brazil after 1964 is bound with the strengthening of the activities of the BNDE system. This finance was provided by three basic mechanisms: (1) transfers of funds to private institutions, which charged a "service fee" for this intermediation; (2) direct lending (loans which could be convertible in equity), subscription of shares and underwriting; and (3) endorsement of loans in foreign currency. Just to give some proportion of its role, the BNDE system administered financial applications equal to 41.2 billion cruzeiros in 1976, equalling 72% of the flow of compulsory savings in that year (Moura e Silva, 1979: 46). In turn, an increasing part of these funds were allocated by the private financial sector.

The BNDE was not the only institution to be privileged with a rapid enhancement of funds: BNH and Banco do Brasil, respectively main suppliers of

credit for construction and rural credit, had also their role expanded. Like BNDE, BNH's funds were significantly increased by the transfer of a special redundancy fund to it, the FGTS.[6] In addition, the central bank maintained a large number of special development programmes; and Banco do Brasil continued to provide loans to agricultural and industrial investment. Therefore, the whole of the medium and long-term financing became dependent on the transfer of fiscal and other public funds towards these three main public financial institutions. The Table VIII. 7 summarises the flow of the main public funds earmarked to finance long-term investment projects.

To sum up, not only did the public funds made available to finance (private) investment rise to proportions which were significantly higher than the period before the financial reforms, but also a complex system of transfers of funds from federal public institutions (BNDE, BNH and the Central Bank) to the private financial sector (and especially commercial, investment and state development banks) was established. This system allowed the private financial sector to participate (profitably, of course) in the process of investment financing. It was as if, having given up the development of a long-term private capital market, the government had decided to leave the allocation of its own funds to private financial institutions. Whether this represented a show of ideological stubbornness or not, certainly the private financial conglomerates and their clients were the most favoured by the system. By 1976, more than 50% of cruzeiro loans to the corporate sectors were either provided by public financial institutions (Banco do Brasil, BNDE, BNH, development banks) or through funds intermediated by the public sector to private financial institutions (savings and loans association, housing credit societies and savings banks (see Table VIII.8.3).

Foreign funds

On the external front, the government's policy was to stimulate the use of the

---

[6] This fund, created in 1966, is financed by an 8% contribution of the employer payroll and it bore monetary correction and interest fixed at 3%.

abundant liquidity in the international financial system.[7] Among such incentives we may list:

(1) reduction of the minimum permitted foreign loan maturity from 10 to 5 years;[8]

(2) fiscal concession over the payment of interest of external loans and income tax exemptions over financial operations (resolutions 305/74 and 278/754);

(3) maintenance of high levels of domestic interest rates through tight monetary policy.

The strategy also included forcing the public enterprises to borrow abroad. This was done by a sequence of measures. First, as noted above, long-term funds available to public enterprises were subsequently reduced, despite the central role of their investments in the Second National Development Plan. Second, these firms' self-financing capacity was diminished by the strict control of their prices and tariffs, a measure which was part of the anti-inflationary policy.[9] Finally, they suffered restrictions to their access to internal credit market.

All these incentives would be fully justified if the external debt was actually required to permit the economy to proceed with its development. But this was not the case. First, it is important to acknowledge that the whole period is characterised by deficits in the real-resources-transfers account (see Table VIII.9).[10] This was caused especially by (1) the rise in the value of oil imports, precipitated by the successive increases in its prices and the increase in the import quantum caused by the

---

[7] As said above, the logic behind this option was the view that the acceleration of accumulation because of the 1974 Plan would cause an increase demand for external resources, whose financing could not count, at least in the medium term, on the increase in exports.

[8] Central Bank's resolution 305 of 1974. Notice that this measure reversed the trend in 1967-73, where the monetary authorities continuously extended the allowed minimum maturity in order to slow down borrowing in foreign currency.

[9] On this see Werneck, 1987.

[10] The method of analysis of the causes of the external debt is identical to the one used in chapters VI and VII. That is, we divide the balance of payments into real resources transfers (RRT), costs of capital (CC) and capital inflows (CI). RRT comprises the trade balance and non-factor payments; CC includes interest charges, amortisation of outstanding foreign debt and profit remittances (the first two corresponding to the great part of CC). CI represents the net foreign capital inflows, which in the period of analysis is principally composed of foreign loans. Given that CI roughly represents the yearly additional debt and that the sum of RRT, CC and CI is equal to the changes in international reserves (RES), than the causes of increase of the foreign debt can be analysed by the ratios of RRT, CC and RES over CI.

Figure VIII.8 - The causes behind the increase of Brazil's external debt (1970-1983)

Total capital inflows = 1

RRT/CI ☐ CC/CI ▦ Res/CI
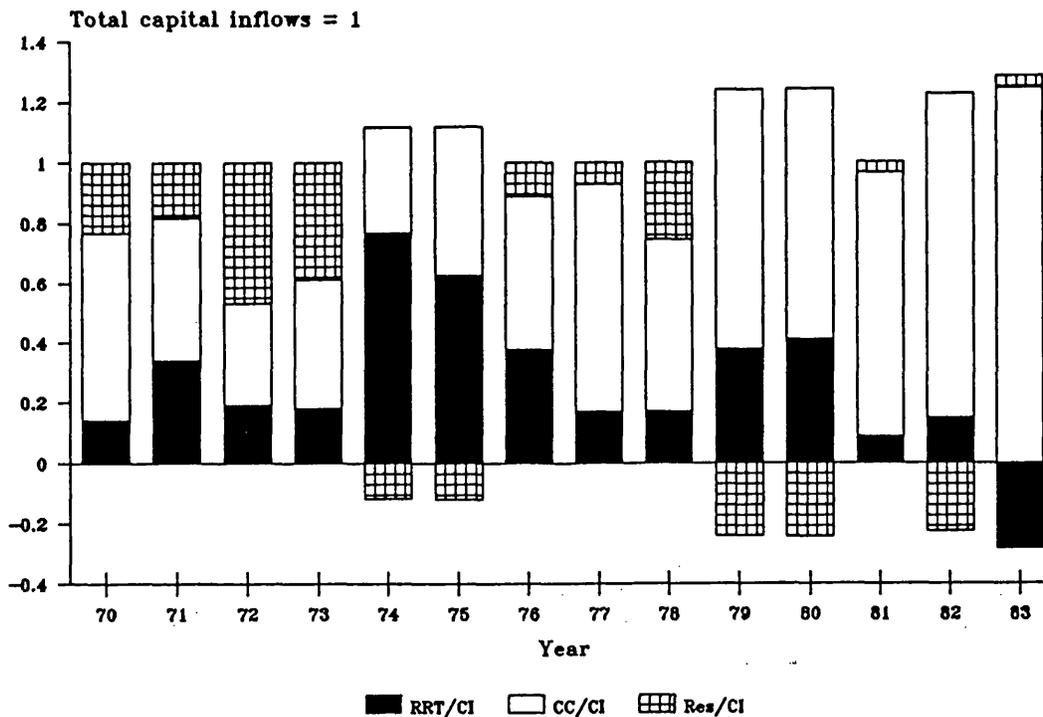
continuance of growth; (2) the rise in the demand for imported basic inputs and capital goods.

However, only in the years 1974 and 1975, can the total volume of the capital inflows can be justified by the rise in the above mentioned gap. From then on, an increasing part of the external borrowing was directed towards the accumulation of reserves. Further, if we look at the percentage of the capital inflows used to simply finance the servicing of the external debt (Figure VIII.8), the picture becomes even more staggering. Already in 1974, when the oil shock was first felt in Brazil's balance of payments account, interest charges and amortisation of the external debt represented more than 30% of the incoming external flows and, from then on, increased almost steadily to reach approximately 90% in 1978.

From the analysis of the two charts mentioned above, one deducts that foreign indebtedness in the period was more a destabilising factor, than one contributing effectively to economic development in Brazil. Even though the tendency to borrow above the financing requirements is a characteristic of the booming credit-based system, this tendency was amplified during the Second National Development Plan because of the high levels of internal interest rates and the incentives - in the case of

the public enterprises, the economic pressure - to borrow in foreign currency above their needs for foreign real resources. It is true that the several external shocks imposed a significant stress upon the Brazilian economy. But this stress was amplified by the structural tendency, already observed throughout the country's post-War development process, to borrow beyond the country's need. This structural feature was then exacerbated by the inconsistency between the development and the financial strategies of 1974.

VIII.3.2. Financial markets and the nonexistence of funding

The 1971 stock market crash seems to have destroyed what was left of government's intentions to develop a private capital market. From them on the investment funds continued to exist, but their operations rapidly turned to applications in the secondary markets and in dealing with government bonds (see Table VIII.10). The investment banks were incorporated into the financial conglomerates led by the old commercial banks, and increasingly reduced the maturities of their operations.

Figure VIII.9 - Interest and amortisation of external debt as percentage of total capital inflows (1970-80)

Interest changes   Amortisation
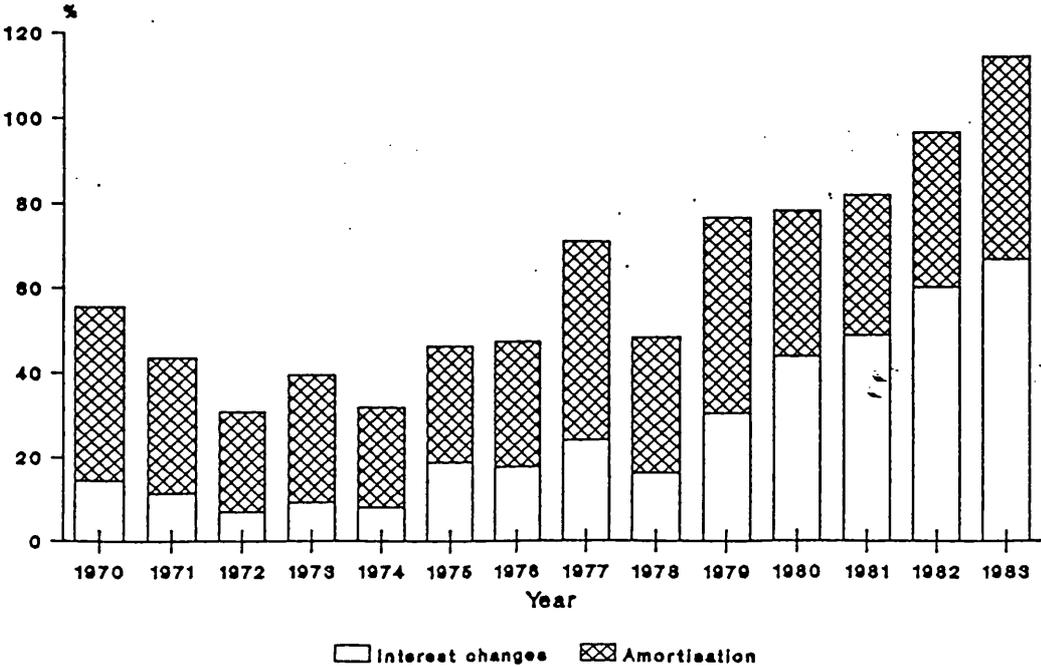
Furthermore, their loans became increasingly dependent on the intermediation of foreign loans and transfers of public funds. Finally, they increasingly held government bonds as speculative balances (see Zini, 1982: 278-92).

Figure VIII.10 - A rough estimate of the shortening of the maturities of financial operations: turn-over of Treasury bills and average days of clearing of cheques (1968-81)
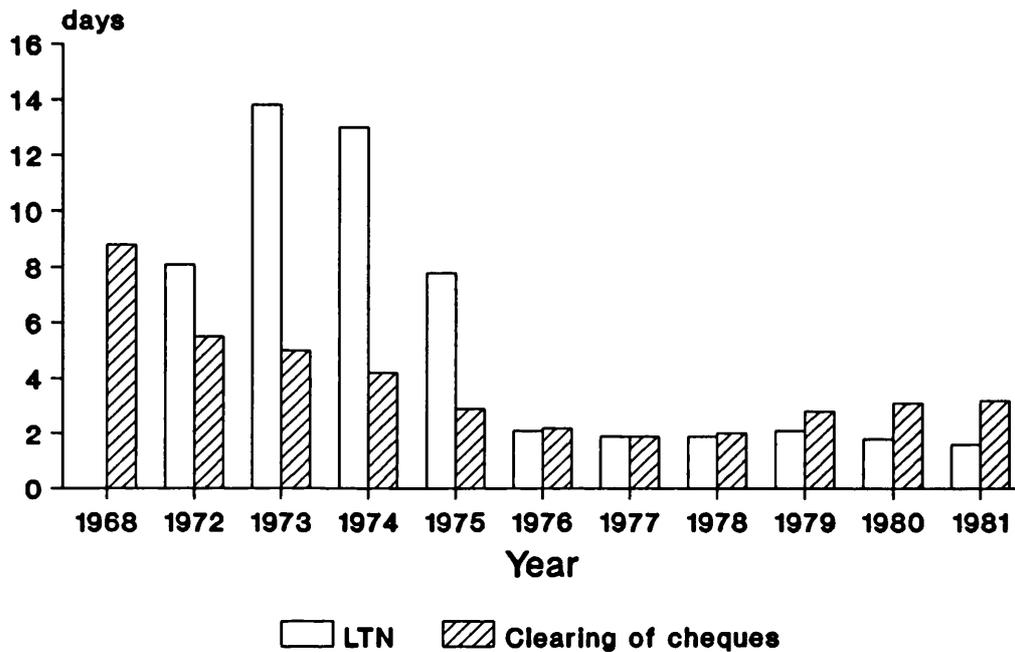
Source: Zini, 1982, p. 279.

It was noted in the previous chapter, that an increase of finance without funding had two important consequences. First, a rapid increase of the financial fragility for lenders and borrowers, which was however mitigated from 1973 by the fact that substantial part of the finance was directly provided by the subsided long-term loans of government agencies.[11] A second consequence is the inflationary bias that this type of finance has, if production cannot keep up with the rise of loans to finance accumulation.

The government showed from the outset concern with the potential inflationary impact of the expansion of the monetary base (caused by the transformation of

---

[11] Nonetheless, this does not apply to the foreign loans obtained through resolution 63. But this will be discussed in detail below.

borrowed foreign currency to cruzeiros) and expansion of the credit provided by the public agencies (Banco do Brasil, BNDE and BNH). This concern was translated into a tight monetary policy basically by maintaining high interest rates on government bonds. The consequences were disastrous: the tight monetary policy associated with the high levels of inflation caused an expected preference of surplus units for indexed assets (not only by households and firms, but also by financial intermediaries). This led to a dramatic situation, since these were either solely issued by government institutions (e.g. ORTNs) or with government backing (e.g. saving deposits). Therefore, the system ended in the perverse situation where, on the one hand, government financed accumulation with increasing foreign and internal debt, while, on the other hand, the monetary policy caused rapidly rising financial costs and damaged the government's own financial situation and financing capacity. These are the topics of the next section.

VIII.4. The shortcomings of the financial strategy

The financial strategy of the 1974 Plan was based on the government's increasing participation in the financing of accumulation and in the intermediation of foreign loans. This strategy naturally depended on government's capacity to transfer funds to investing firms and the continuance of the inflows of foreign loan capital at reasonable conditions. These conditions were broken, partly because of the external shocks (especially the interest rate shocks), but also because of the monetary policy implemented since 1974 which, in our view, was inconsistent with the acceleration of accumulation in a credit-based financial system.

VIII.4.1. The vicious circle of the monetary policy

The period between 1974 and 1979 is characterised by a typical stop-go policy, but with a constantly strong control over monetary aggregates. The Minister of Finance, Mario H. Simonsen, was convinced that inflation was caused by excess demand - caused by the fast increase of government expenditures in the 1974 Plan

and public (subsidised) credit - and the external price shocks.[12] Even though his view was not dominant in the government until 1976, the monetary policy was restricted since 1974, causing substantial rises in the rate of interest (see Tables VIII.8.5 and VIII.8.6).

In 1976, when inflation rose from 33 to 47%, the view that inflation had to be controlled through monetary policy gained strength within the government.[13] The monetary policy started then focusing on two objectives: (1) to prevent inflation from rising; (2) to attract foreign 'saving'. The tight monetary policy - associated with the expansion of demand caused by the investment boom, persistent inflation and a highly concentrated financial structure - maintained significant upward pressure on the interest rate (see Tables VIII.8.5 and VIII.8.6). The whole extent of that pressure was felt when, in 1976, interest rates were freed from ceilings and had a rapid growth.[14]

The high levels of rate of interest resulted in a rapid rise of the financial costs of productive firms and of the participation of the financial system in the GNP. Given the high level of concentration in the Brazilian economy and the high levels of indebtedness, this increase in financial costs were directly transmitted to prices. Higher inflation increased the impetus of the monetary authority to absorb the excessive liquidity by issuing government bonds (LTN) and thus raising interest rates. The vicious circle of monetary policy and public indebtedness was set.

---

[12] Simonsen's main concern was only made public after he left the post in 1979. In 1984 he would state that "strong inflationary pressure were created in 1973, when M_1 expanded 47%, output grew far faster than its tendency and the OPEC quadruplicated the oil prices. However, the Medici government was strongly committed to the maintenance of inflation at 12% and, with strict controls of prices and subsidies, the general price index was *repressed* at 15.7%" (quoted in Fishlow, 1986: 51).

[13] See Central Bank Report, 1976.

[14] This was done through the National Monetary Council Resolution 361 of 12/03/1967, which permitted finance companies and investment banks to determine their loan rates freely. Resolution 389 of 15/09/1976 did the same for commercial banks.

VIII.4.2. The link between internal and external debt

The government's attempt, at the same time, to reduce aggregate demand and attract foreign loans through the maintenance of high levels of interest rate created a direct link between the external and internal debt. This link has two very perverse facets: one short run, the other long run.

Figure VIII.11 - Financial speculation, external and internal debt: the *ciranda financeira* in the 1970s-1980s
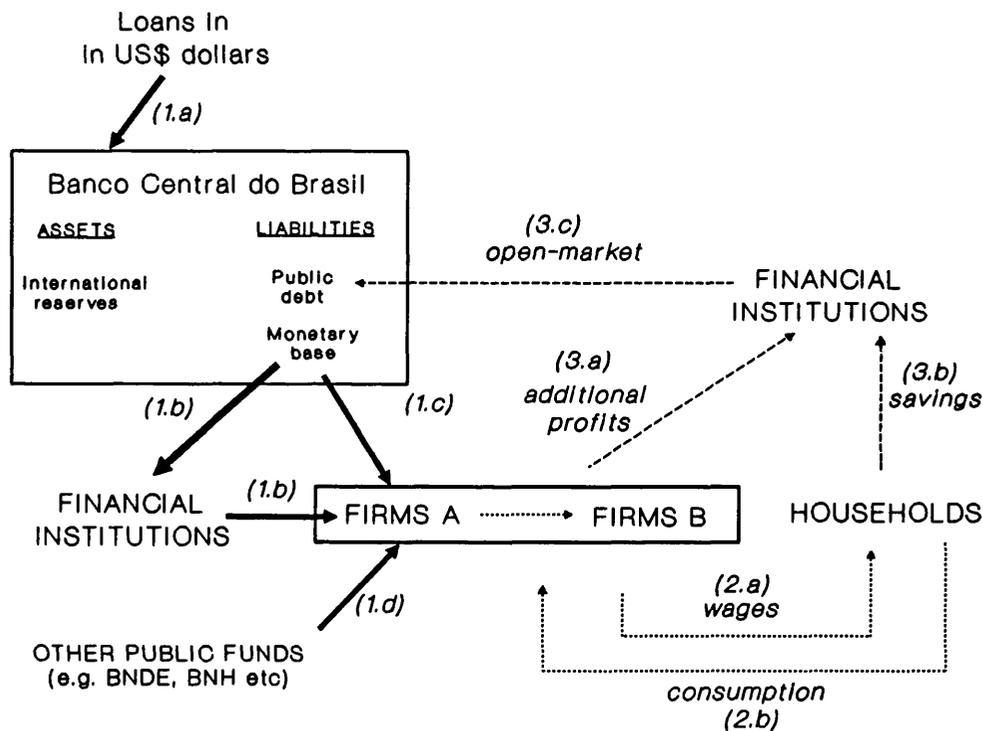
Obs.: see text for explanation.

The short-run facet and can be summarised by using a diagram (see Figure VIII.11).[15] In this diagram, the bold lines represent finance, the dotted lines describe the financial flows linked to the multiplier process and the dashed lines symbolise the financial applications by the surplus units (firms and households); two firms are assumed: an investing firm (A) and a firm B which produces capital goods

---

[15] The interrelation between external and foreign debts in Brazil had been already been pointed out by Pereira (1974). However it was Tavares (1978) who fully described this macroeconomic process, which she named the financial "ring-around-a-rosy" (*ciranda financeira*). This metaphor was used to emphasise the merely circular character of the interrelation mentioned above. See text for more detail.

and wage-goods.[16] The causal links can be described as follows:

(1.a) a foreign loan is obtained either directly by a firm under instruction 4131 (1.c in the diagram) or by a financial institutions under Resolution 63 (1.d);

(1.b) the money supply is expanded because of the increase in external debt beyond the requirements of the financing of balance of payments, resulting in accumulation the of international reserves; or (1.d) because of the expansion of subsidies and subsidised credit from public financial institutions in order to stimulate investments under the 1974 Plan;

(2) such an expansion has a multiplier effect which ends up in additional profits (due to the high level of mark-up in Brazil's oligopolistic industries;

(3) in an attempt to reduce liquidity and thus the inflationary pressure the central bank increases interest rates in order to issue more government bonds. In turn, higher interest rates increase the financial costs due on the outstanding stock of debt.

The long-run facet is related to the fact that significant part of the external debt incurred by public enterprises was used for expansion of the capacity to produce basic inputs. However, when such investment projects matured (by the end of the 1980s), these firms could not profit from their enhanced productive capacity as their prices were being controlled in the 1970s until 1983 as part of government's anti-inflation policy. The result was that the government (through its enterprises) became the main external debtor, whereas the private sector was the main beneficiary from the externalities of public investment (see Werneck, 1987: 564).

This schizophrenic long-term situation enhances the short-term perversity of the *ciranda financeira*, especially in the end of the 1970s and beginning of the 1980s. Then the source of expansion of exports was mainly private enterprises whereas the foreign debt was on the hand of the public sector (see Castro and Souza, 1982). In this case, the only way to repay the debt without further expanding the money supply was to accelerate the growth of internal debt and therefore promote the substitution

---

[16] This is a very unorthodox division, but certainly is suitable for the graphic exposition of the diagram mentioned below. A more complete division, like in Kalecki's (1971) would divide the sectors in industries producing, respectively, investment and intermediary goods, capitalist goods and wage-goods.

of external public debt for internal public debt (Werneck, 1987 and especially Cavalcanti, 1988). This explains the increasing link between foreign and public debt (see Table VIII.11).

VIII.4.3. Financial fragility

Even though the allocation of fiscal and para-fiscal funds to the non-financial private sector had significantly increased in the 1970s, this could not avoid the increase in financial fragility as the level of short-term corporate debt rose from 1974 to 1979 (see Table VIII.12). The differences now, in relation to the period previous to the reforms of 1964-66, are two: first, a significant part of this debt was linked to obligations in foreign currency, either directly incurred by firms or intermediated by financial intermediaries. In both cases, however, the loans were based on floating interest rates, because of the conditions of credit in the 1970s international markets (on this, see among others, Aglietta, 1985). This created a directly link between the financial stability of the indigenous firms and the changes of monetary policies (and hence interest rates) in the Western economies - and especially in the United States.[17]

A second difference was the government's commitment to maintain high interest rates in the whole period between 1974 and 1979, rates which were 'liberalised' in 1976.[18] Given the characteristics of the private lending institutions, which we have already discussed above, this liberalisation was likely to cause the explosion of the costs of borrowing for at least two reasons: (1) the normally high mark-up maintained by banks which is linked to the basic rates, which, after indexation, were mainly determined by the rates on government indexed bonds; (2) the tendency for this mark-up to rise with inflation, as the lender's risk increases.

The result of such an extraordinary conjunction of factors has been documented in several works on the financial behaviour of the non-financial firms in

---

[17] There is an extensive literature on the effects of the change of US monetary policy in 1979 and its role in the triggering of the Third World Debt crisis. See e.g. FitzGerald, 1989.

[18] The reasons for this commitment, which have been discussed above, were the related to the government's policies to combat inflation and to attract 'foreign savings'.

the 1970s and 1980s in Brazil - see *inter alia* Calabi et al (1981), Zini (1984), Almeida (1987 and 1988) and Almeida and Ortega (1987). Table VIII.12 summarises some of the indicators of the increasing financial fragility in the 1970s and 1980s. This table shows that neither the process of indebtedness in the 1970s nor the financial restructuring in the 1980s were equal for the private and public enterprises. This can interpreted from what has been said above.

Let us take first the period of growth (roughly represented by the data from 1969 to 1977 in Table VIII.12). As this shows, all firms increased their levels of indebtedness rapidly. However it is the private national enterprises which have the fastest increase in their debt ratios. This increase of indebtedness is closely followed by a rise in financial costs to all firms, but especially to the private nationals. The reason for this disproportional increase of debt seems to be the fact that the size of these firms, and hence need for financial levering, was smaller than foreign and public firms in the beginning of the Second National Development Plan. In turn, as pointed out above, the national firms had their sources of finance (public and foreign funds) significantly expanded after 1967. This contrasted with the public enterprises, which had their access to internal credit limited as part of the government's policy to capture 'foreign savings' using their firms for this purpose. Finally, as regards the foreign firms, their access to loans through instruction 4131 provided a disguised form of foreign investment, but their role in the Second National Development Plan was much less prominent than that allotted to the public and national private enterprises.

In turn, one can see from Figure VIII.13 that the public enterprises were the group which had the fastest rise of their financial costs in relation to net operating income, a rise which was disproportionate to the performance of their debt-equity ratio. This has to do with two factors: first the already mentioned fact that the government reduced the allocation of its subsidised credit to its enterprises in favour of the private financial sector. The public firm was thus forced to finance its long-term investment by borrowing in much worse conditions than the private ones. Second, also already mentioned, these firms' capacity to increase prices was limited by the government's anti-inflationary policy. At the beginning of the crisis in the early 1980s, Brazilian firms had very high levels of debt and they were incurring

Figure VIII.12 - Debt-equity ratios from 1969 to 1977
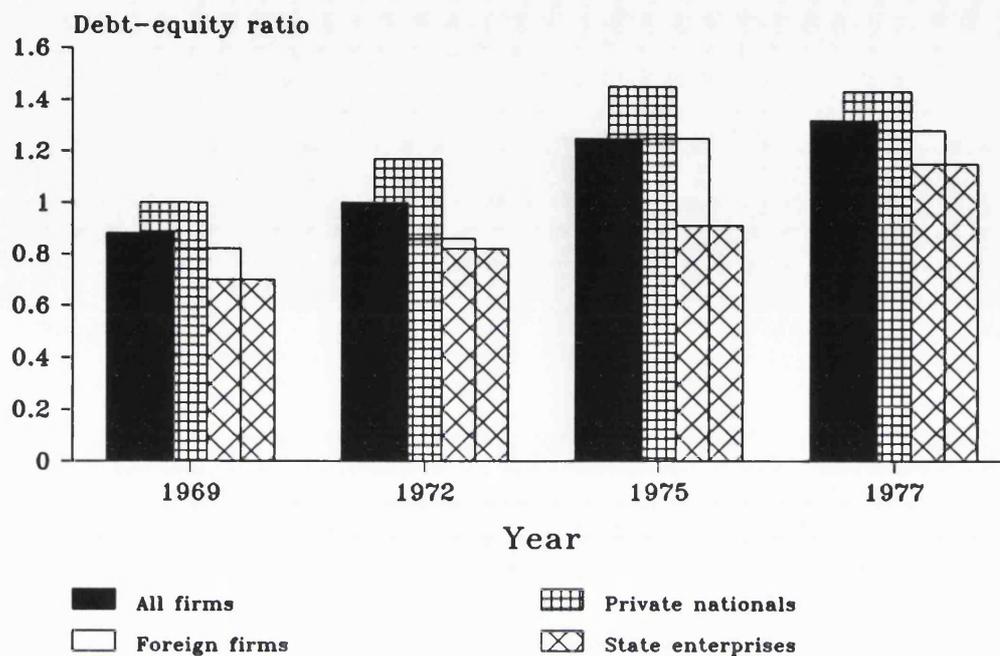
Source: Table VIII.12.

Figure VIII.13 - Financial costs as a percentage of net operating income

Source: Table VIII.12.

226
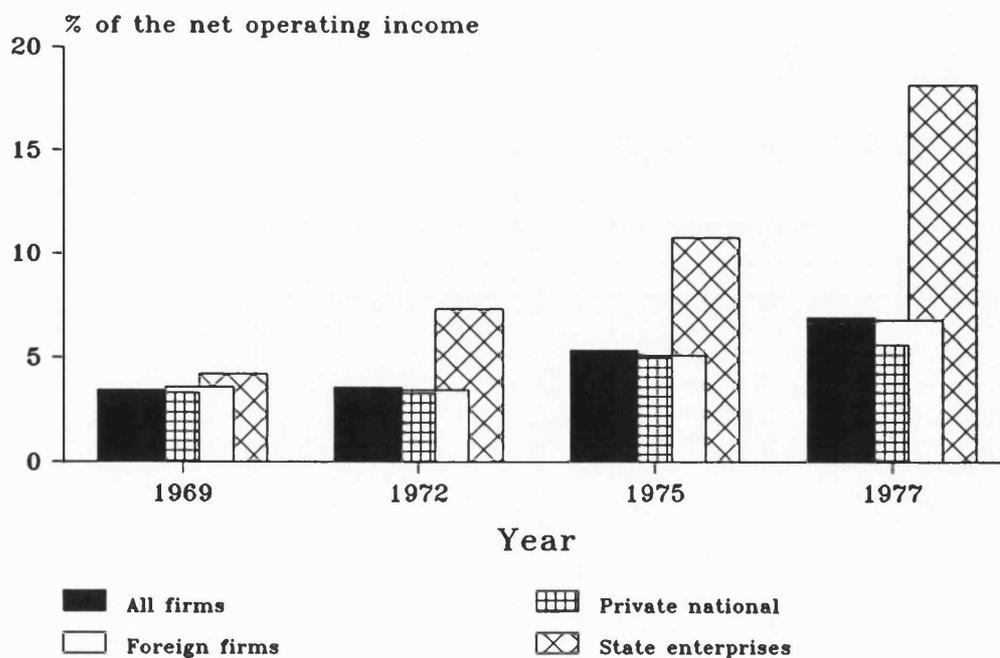
further high levels of indebtedness (see Figure VIII.13). As was noted in the previous chapter, because of the degree of oligopoly of the corporate sector in Brazil, in periods of slow-down after an intensive accumulation, firms will attempt to reduce their financial vulnerability by increasing their prices so as to repay their outstanding debts. The period from 1978 to 1983 was no exception.

The differences in relation to the experience previous to 1964 are two: first, the process of financial restructuring implemented by the private non-financial sectors was very rapid, which avoided surges of financial instability. This rapid restructuring was made possible by the already mentioned mechanisms of financial speculation on the rising public debt, which meant higher interest rates for those firms which had sufficient mark-up power to create surplus amidst the crisis (see e.g. Almeida, 1984).

A second difference was the fact that the public enterprises' capacity to undertake their own financial restructuring was purposefully limited by the government's policies to reduce inflation and to attract foreign currency to finance the increasing costs of the external debt. As regards the policy to combat inflation, the public enterprises had their prices readjusted above the rate of inflation (see Werneck, 1987). Given the increasing deficits of these firms, and the legal constraints imposed on them to obtain credit domestically, they were forced to borrow in foreign currency.

To sum up, the end of the 1970s was Brazil's economy in a process of deepening financial fragility. This did not turn into financial instability, because firms were capable to restructure financially, at the expense of transferring debts to both the central banks and public enterprises. Not surprisingly, the main financial characteristic of the lost decade (i.e. the 1980s) was the disarray of the public finance.

VIII.5. Conclusion

Brazil's 1964-66 financial reform proved very successful in diversifying the financial structure of the country, especially in creating specialised institutions to deal with consumer and housing credit. This financial innovation increased the market for liquid assets by introducing short-term indexed assets which competed with non-

Figure VIII.14 - Debt-equity ratios from 1978 to 1983
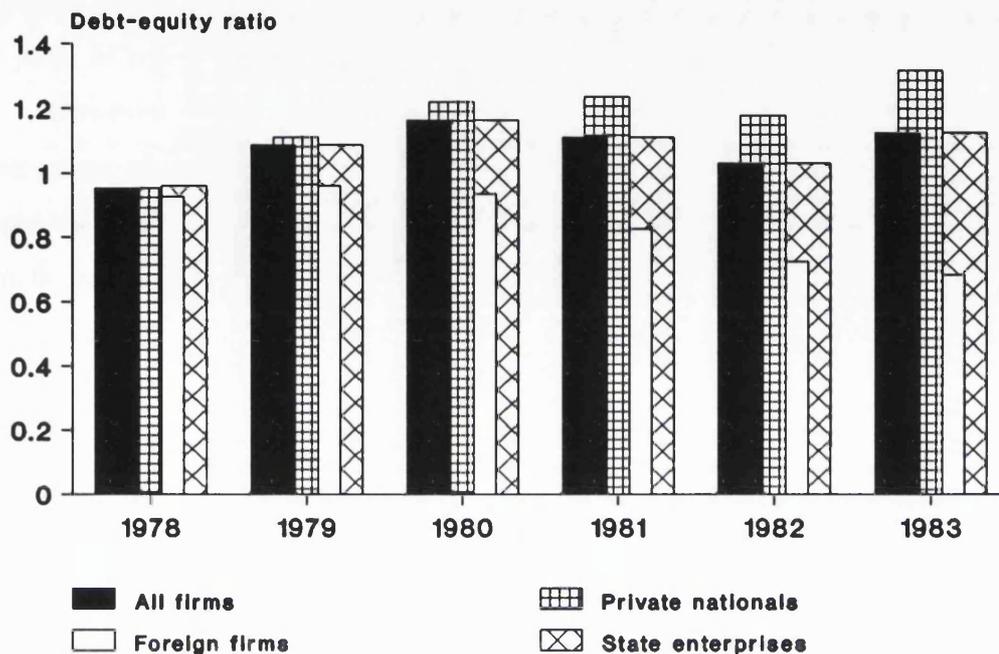
Source: Table VIII.12.

Figure VIII.15 - Financial costs as a percentage of net operating income

Source: Table VIII.12.

228
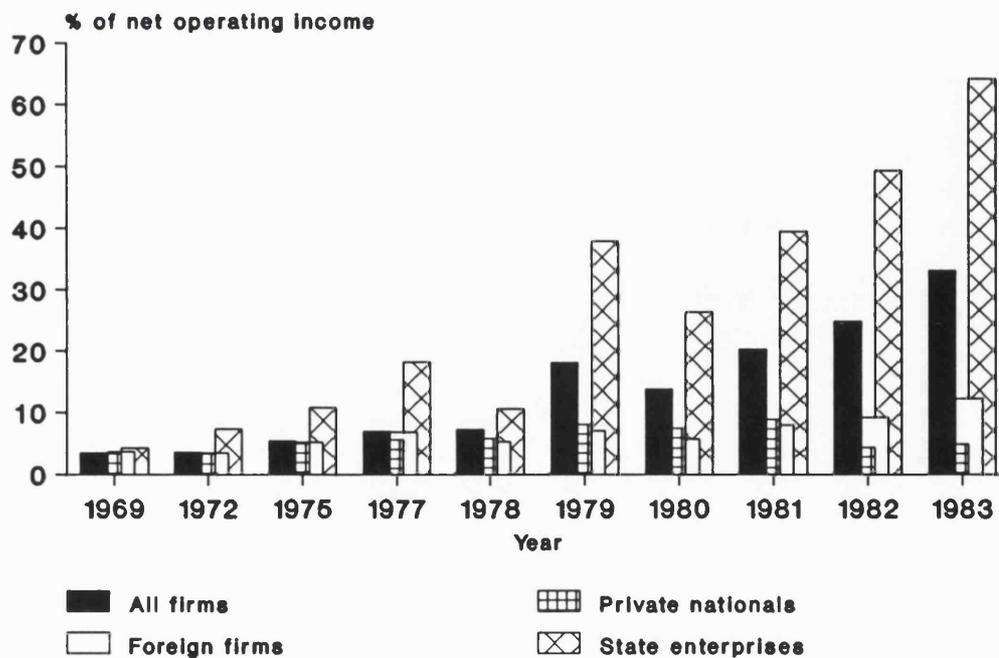
indexed assets. Further it provided the financial grounds for recovery and boom in the period 1967-73, mainly based on the use of the idle capacity accumulated after five years of recession between 1962 and 1966.

However the reforms failed in one of its most important aspects: the development of private long-term financing mechanisms. In other words, the reform created the basis for financial widening based on a competitive market of short-term financial assets, whose return depended basically on the indexed government bonds. But it failed to create the mechanisms to transform the enormous accumulation in financial wealth into funds which could support accumulation (that is, long-term finance and funding of productive investment). The result was that an enormous financial wealth was accumulated at a much faster pace than the process of financing capital accumulation and with no direct link to capital accumulation. This created a highly speculative climate, which was enhanced by the orthodox monetary policy pursued from 1974 on.

As a consequence, when the limit of idle capacity was reached, and investment started increasing, the problem of financing long-term positions was even more acute than before the financial reform. The full extent of the constraint to growth imposed by the dysfunctional financial structure was only to be felt when accumulation accelerated in 1974, with the Second National Development Plan. Then the government had to rush in with *ad hoc* measures in order to increase the supply of finance to investment, including the hike of public funds intermediated by the private financial sector and the incentives for indigenous firms to become indebted in foreign currency. Despite the partial success in increasing these sources of finance, the government's monetary and external debt policies were never consistent with the attempt to accelerate accumulation given the financial structure inherited from the 1960s. With this structure, the mix of expansionary fiscal policy and conservative monetary policy ended up encouraging untenable external and internal debts and resulting in a highly speculative and financially fragile economy. The nonexistence of internal private sources of funding created a system in which was vulnerable to changes in the government's capacity to finance and of the credit conditions in the international financial markets. In addition to that, the process of financial deepening served only to increase the level of indebtedness within the private sector (based on

consumer credit) and public debt, therefore increasing the susceptibility of the system to surges of financial instability.

Even though investment began to decelerate in the end of the 1970s, with the conclusion of many investment projects undertaken in the 1974 Plan, the significant recession of the beginning of the 1980s had to do with the government's desperate attempt to equilibrate the balance of payment in face of increasing external pressures for adjustment. The orthodox policies then adopted dragged the country into a financial trap, where the private and public firms, which had increased their productive capacity in the 1970s, could not benefit from the potential increase in profits. The only way a major surge of financial instability was avoided was to transfer the burden of the internal and external debts to government. Even though this was not seemingly a deliberate action, the transfer was permitted by government's policies from 1979 onwards. These included a monetary policy which raise the interest rates paid on the public debt, providing those firms with surpluses to obtain high capital gains through the speculation with government bonds; and a policy towards the public enterprises which reduced their relative prices and tariffs and forced them to borrow in foreign currency. The consequence was that the financial restructuring of the private sector took place to the detriment of the financial health of the government and its enterprises

It must be stressed that the process of financial deterioration which has been described above is directly linked to the choices of development financing taken in the 1970s and the orthodox orientation of the government's policy, and not solely by the consecutive external oil and interest rate shocks (as the last military governments tried to establish). Finally, it cannot be forgotten that the Brazilian State has historically played an important leading role in Brazil's process of development, as we showed in the previous chapters and in this one. Therefore, the bankruptcy in which the State was left after 1983 is significantly responsible for the poor performance of the economy in the 'lost decade' and up to now.

STATISTICAL APPENDIX TO CHAPTER VIII

Table VIII.1. Macroeconomic indicators of growth, inflation and the external sector (1970-83)

YEAR	GROWTH (annual real rate, %)					INFLATION (annual rate, %)		EXTERNAL SECTOR (%)			
	GNP	per capita GNP	Industry	Agriculture	GNP deflator	WPI [1]	M/GNP [2]	X/GNP [2]	Debt/GNP [2]	Debt/Exports
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1974-80	6.8	4.2	7.0	5.4	51.2	49.2	8.5	6.9	18.7	274.2
1981-83	-0.8	-3.1	-3.4	-0.1	120.4	123.0	7.2	8.4	27.5	327.6
1970	10.3	7.7	10.4	10.3	16.4	19.8	5.5	6.0	11.6	193.3
1971	11.3	8.6	11.8	10.2	20.4	20.0	6.5	5.8	13.3	228.0
1972	12.1	9.4	14.2	4.0	19.4	17.3	7.2	6.7	16.1	238.6
1973	14.0	11.2	17.0	0.0	22.6	14.9	7.8	7.8	15.8	202.8
1974	9.0	6.4	8.6	1.0	34.4	28.7	11.9	7.5	16.1	215.9
1975	5.2	2.6	4.9	7.2	33.9	27.9	9.6	6.8	16.7	244.2
1976	9.8	7.1	11.8	2.4	47.4	41.2	8.0	6.5	16.7	256.6
1977	4.6	2.1	3.3	12.1	46.2	42.7	6.6	6.7	17.7	264.3
1978	4.8	2.3	6.5	-3.0	38.9	38.7	6.7	6.2	21.2	343.7
1979	7.2	4.6	6.7	4.9	55.6	54.0	7.6	6.4	21.1	327.4
1980	9.1	6.5	9.2	9.6	91.8	100.2	9.1	8.0	21.4	267.5
1981	-3.4	-5.6	-9.2	6.1	102.6	109.9	7.9	8.3	22.0	263.6
1982	0.9	-1.4	-0.1	-1.9	92.9	95.5	6.6	6.8	23.7	347.9
1983	-2.5	-4.8	-6.6	1.8	151.8	154.5	7.0	9.9	36.8	371.3

Sources of Raw Data:

cols. 1, 2, 3, 4, 6, 7, 8, 9 and 10: as in Table V.1. col. 5: IBGE, 1987, p. 111; col. 6: idem, pp. 189-193; cols. 7-8: idem, pp. 536-537; col. 9-10: idem, p. 543.

232

Table VIII.2. Investment indicators

Year	TOTAL INVESTMENT[1]		PRIVATE INVESTMENT		GOVERNMENT INVESTMENT[3]	
	% of GNP (1)	real growth[2], % (2)	% of total investment (3)	real growth[2], % (4)	% of total investment (5)	real growth[2], % (6)
1974-80	23.6	6.4	39.3	3.5	60.7	6.2
1981-83	19.5	-11.9	36.8	-16.2	63.2	-8.5
1970	20.5	1.5	44.1	3.1	55.9	2.7
1971	21.1	15.3	42.5	11.2	57.5	18.6
1972	21.1	16.7	43.5	19.5	56.5	14.7
1973	23.2	21.0	38.3	6.5	61.7	32.1
1974	25.4	13.3	39.0	15.3	61.0	12.0
1975	26.8	9.7	39.0	9.7	61.0	9.7
1976	23.1	6.8	45.4	24.3	54.6	-4.4
1977	22.0	-1.4	44.6	-3.2	55.4	0.0
1978	22.6	3.1	39.5	-8.7	60.5	12.6
1979	22.5	4.7	32.1	-14.9	67.9	17.5
1980	22.4	8.5	35.4	19.6	64.6	3.2
1981	22.3	-13.3	39.2	-3.9	60.8	-18.4
1982	20.6	-5.4	36.0	-13.1	64.0	-0.4
1983	15.7	-17.0	35.1	-19.1	64.9	-15.8

Sources of Raw Data: as in table V.1

Observations: (1) total investment includes changes in inventories; (2) from 1966 to 1969 real total investment was obtained by deflating nominal valued by GNP implicit deflator (from table VIII.1, col. 5); data for 1970-83 obtained from IBGE, p.126; (3) includes investment of government-owned enterprises; [4] simple average of the period.

233

Table VIII.3. Indicators of the results of the Second National Development Plan

Year	1973	1974	1975	1976	1977	1978	1979	1980	1981
Ratio between Imports and Domestic Production									
Intermediary Products	0.22	0.25	0.12	0.13	0.13	0.10	0.11	0.08	0.08
Paper	0.16	0.2	0.1	0.05	0.05	0.04	0.03	0.02	0.01
Cellulose	0.76	0.99	0.34	0.72	0.38	0.45	0.15	0.03	0.02
Polyethylene	0.23	0.63	0.21	0.45	0.33	0.35	0.47	0.08	0.03
PVC	0.25	1.98	0.33	0.15	0.09	0.06	0.03	0.03	0.05
Steel	2.68	1.05	1.86	1.34	1.48	1.30	0.34	1.17	0.85
Fertiliser	0.58	0.64	0.68	0.58	0.62	0.45	0.37	0.26	0.14
Capital Goods (to order)	0.66	0.64	0.65	0.64	0.46	0.55	0.37	0.49	0.40
Total	100	123	111	100	88	88	90	84	74
Petroleum	100	93	93	94	88	93	97	78	77
Capital Goods	100	125	144	98	70	67	64	65	57

Source: Fishlow (1986: 521). The sectoral data was based on producers' estimate reported in *Revista Exame* magazine, may 1983.

Table VIII.4. Industrial production by categories of usage (1977-1983)

Year	Capital goods	Intermediary goods	Consumer goods		
			Total	Durable	Nondurable
1977	-4.5	7.5	0.3	-0.1	0.3
1978	5.9	6.5	8.0	17.0	6.4
1979	5.6	8.6	4.9	7.7	4.4
1980	6.5	8.3	6.0	10.7	5.2
1981	-19.0	-10.6	-6.4	-26.3	-2.9
1982	-10.8	0.4	2.7	8.0	1.8
1983	-12.8	0.3	1.6	9.5	0.2

Source: Banco Central do Brasil, Economic Program, October 1983, p. 44.

235

Table VIII.5 - Discrimination of imports

Year	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
	In US$ Million									
Oil	327	409	711	2840	2873	3827	3814	4196	6403	9405
Capital Goods	1239	1734	2142	3119	3934	3519	3101	3553	3775	4381
Raw Materials	1273	1565	2560	5588	4350	4057	3909	4532	5954	7059
Grains	114	132	350	486	372	533	279	702	984	1241
Basic Inputs	1045	1291	1993	4664	3595	3140	3202	3286	4160	5010
Other	114	142	217	438	383	384	428	544	810	808
Consumption Goods	358	464	721	826	866	932	1116	1582	1315	989
	As percentage of total imports									
Oil	10.1	9.7	11.5	22.5	23.5	30.9	31.7	30.7	35.4	41.0
Capital Goods	38.2	40.9	34.6	24.7	32.2	28.4	25.8	26.0	20.9	19.1
Raw Materials	39.2	37.0	41.3	44.2	35.6	32.8	32.5	33.1	32.9	30.8
Grains	3.5	3.1	5.7	3.8	3.0	4.3	2.3	5.1	5.4	5.4
Basic Inputs	32.2	30.5	32.2	36.9	29.4	25.4	26.6	24.0	23.0	21.8
Other	3.5	3.4	3.5	3.5	3.1	3.1	3.6	4.0	4.5	3.5
Consumption Goods	11.0	11.0	11.6	6.5	7.1	7.5	9.3	11.6	7.3	4.3

Source: Central Bank and Castro and Pires de Souza (1982)

Table VIII.6. The international rates of interest and the terms of trade

| Year | LIBOR | Real Libor | | | PRIME | Real "Prime" | | | Terms of Trade |
		US WPI	US CPI	Terms of Trade		US WPI	US CPI	Terms of Trade	
1967	5.5	5.2	2.6	7.8	5.6	5.4	2.7	7.9	135.1
1968	6.4	3.8	2.1	11.1	6.3	3.7	2.0	11.0	128.7
1969	9.8	5.6	4.1	5.1	8.0	3.9	2.4	3.3	134.7
1970	8.8	5.0	2.7	-1.1	7.9	4.2	1.9	-2.0	148.0
1971	7.0	3.5	2.5	13.5	5.7	2.3	1.4	12.3	138.3
1972	6.0	1.5	2.6	5.1	5.2	0.8	1.9	4.4	139.5
1973	9.3	-3.3	3.0	-1.7	8.0	-4.5	1.7	-3.0	154.9
1974	11.2	-6.4	0.2	27.9	10.8	-6.7	-0.2	27.5	129.0
1975	7.8	-1.3	-1.2	10.3	7.9	-1.2	-1.1	10.4	125.7
1976	6.2	1.6	0.4	-5.9	6.8	2.1	1.0	-5.3	141.0
1977	6.4	0.3	-0.1	-6.5	6.9	0.8	0.4	-6.1	159.3
1978	9.2	1.3	1.4	23.7	9.1	1.2	1.4	23.6	136.1
1979	12.2	-0.3	0.8	19.3	12.7	0.1	1.2	19.8	126.4
1980	14.0	-0.1	0.4	32.1	15.2	1.0	1.5	33.3	103.6
1981	16.8	7.0	5.8	32.9	18.8	8.9	7.6	35.0	86.8
1982	13.6	11.4	6.9	15.3	14.8	12.6	8.1	16.6	85.3
1983	9.9	8.5	-32.7	9.9	10.8	9.4	-32.1	10.8	85.3
1984	11.2	8.6	6.6	2.3	12.1	9.4	7.4	3.1	92.9
1985	8.7	9.1	5.0	15.2	9.9	10.4	6.2	16.5	86.8

Source: Cavalcanti, 1988, p. 24.

Observations: US WPI = nominal rate deflated by the United States wholesale price index; US CPI = deflated by the US general price index.

Table VIII.7. Three most important public sources of long-term financing of private investment (current Cr$ millions and as a percentage of total aggregate investment)[19]

Year	BNDE[1]	BNH[2]	Central Bank[2]	Total	(4) as a percentage of Investment
	(1)	(2)	(3)	(4)	(5)
1967	437	...	...	437	3.2
1968	467	1422	...	1889	8.6
1969	1032	1709	...	2741	8.2
1970	1443	2749	1708	5900	14.8
1971	2274	3596	4771	10641	19.4
1972	3755	4368	4776	12899	17.5
1973	5368	6325	8010	19703	17.5
1974	11219	13442	13344	38005	21.0
1975	22430	19188	24279	65897	24.4
1976	32733	39586	43200	115519	30.7
1977	49379	61740	49957	161076	29.4
1978	74063	94761	5828	174652	21.4
1979	111875	146272	58454	316601	23.2
1980	175467	359145	135441	670053	23.6

Sources: col 1: Zonisein, 1984, p.28; col 2: Zini, 1980, p.350; col. 3: idem, p. 325.
Observations: (1) include transfers to other financial institutions; (2) funds and programs administered by the Central Bank of Brazil.

---

[19] Banco do Brasil's loans were not included because most of them did not represent earmarked transfers from the monetary authorities, but credit-creation.

Table VIII.8.1. Financial assets: 1967 million cruzeiros and growth rates

Year	MONETARY (MA) [1]				NON-MONETARY ASSETS (NMA)[1]				Government Bonds				TOTAL (FA)[1]
	Currency	Demand deposits		Total MA	Time Deposits	Passbook savings	Bills of Exchange	Housing Bonds	ORTN	LTN	Other	TOTAL NMA	
		Banco do Brasil	Other[2]										
Average yearly growth rates (%)													
1967-73	11.6	14.4	13.4	13.2	52.7	96.1	33.7	40.7	19.5		157.9	44.8	26.1
1974-80	6.1	-7.2	1.1	0.8	11.7	32.6	-12.5	-63.8	12.9	12.2	25.9	11.5	7.3
1981-83	-15.0	-13.4	-21.4	-19.2	33.1	21.7	38.0	-6.3	44.8	-7.3	14.0	26.4	15.7
In constant 1967 million cruzeiros													
1970	3.8	3.0	13.0	19.8	2.5	1.2	5.5	1.1	5.3	0.4	0.7	16.6	36.4
1971	4.0	3.6	14.0	21.6	4.4	1.8	6.7	1.5	5.4	1.8	0.7	22.3	43.8
1972	4.6	3.8	17.0	25.4	6.8	3.1	8.3	2.0	6.3	4.1	0.7	31.2	56.6
1973	5.7	5.1	21.7	32.5	8.9	4.9	12.0	2.3	7.2	6.0	11.2	52.5	85.0
1974	5.6	5.6	22.5	33.6	9.0	7.8	11.5	2.2	8.9	4.0	1.5	44.8	78.4
1975	6.5	5.8	25.4	37.7	11.5	11.6	11.7	1.9	12.6	7.9	2.9	60.1	97.8
1976	6.9	5.5	24.6	37.0	10.9	16.0	10.2	1.5	12.6	10.3	3.5	64.9	101.8
1977	6.8	4.7	24.2	35.7	13.9	18.5	8.5	1.1	12.5	12.6	3.3	70.5	106.2
1978	7.1	4.7	24.6	36.3	17.0	21.7	9.8	0.8	12.3	14.6	3.5	79.8	116.1
1979	8.2	5.5	27.2	40.9	17.7	25.6	9.1	0.6	12.3	13.2	4.1	82.6	123.5
1980	7.1	4.1	23.5	34.7	14.0	24.0	6.7	0.0	14.4	6.3	3.7	69.1	103.9
1981	6.1	3.4	21.4	30.9	5.9	28.9	5.7	0.0	23.1	12.8	4.8	81.3	112.2
1982	6.0	2.9	17.3	26.2	7.9	34.0	10.6	0.0	38.1	8.7	6.2	105.5	131.7
1983	4.4	2.6	13.2	20.2	10.5	42.8	10.9	0.0	48.4	11.0	6.2	129.9	150.0

Source: From 1964 to 1972: Banco Central do Brasil, Monthly Bulletin, 10(1), January 1974, pp. 4-11; from 1973 to 1979: idem, 16(11), November 1980, pp. 82-3; from 1980 to 1983: idem, 20(2), February 1984, pp. 74-77. Observation: (1) deflated by the wholesales price index as in Table VI.1. (IGP-DI); (2) include all other commercial banks and federal and state savings banks.

Table VIII.8.2. Financial assets: percentage of total assets

		MONETARY												% GNP			% Total	
Year	Currency	Demand deposits		TOTAL	Time Deposits	Passbook savings	Bills of Exchange	Housing Bonds	Government Bonds			TOTAL	MA	NMA	Total	Indexed	F.Y.
		Banco do Brasil	Other[1]						ORTN	LTN	Other						
1966	17.8	12.0	49.6	79.4	2.4	0.1	6.9	0.4	10.6	n.a.	0.3	20.6	14.5	2.3	16.7	11.4	88.6
1967	13.9	10.7	48.4	73.0	3.3	0.4	10.0	1.4	11.8	n.a.	0.2	27.0	12.7	3.3	15.9	13.7	86.3
1968	12.8	10.3	43.8	67.0	4.5	1.0	14.3	2.0	11.0	n.a.	0.1	33.0	13.4	5.0	18.3	14.2	85.8
1969	12.1	10.2	41.2	63.5	4.7	2.0	13.9	2.7	13.2	n.a.	0.0	36.5	14.1	6.9	21.0	17.9	82.1
1970	10.3	8.4	35.8	54.5	6.8	3.3	15.0	3.1	14.5	1.1	1.8	45.5	14.5	8.4	22.9	22.6	77.4
1971	9.1	8.2	31.9	49.2	10.1	4.1	15.3	3.3	12.3	4.1	1.6	50.8	13.6	11.4	25.0	21.3	78.7
1972	8.1	6.7	30.0	44.8	11.9	5.4	14.7	3.5	11.2	7.2	1.2	55.2	13.3	13.7	27.0	21.4	78.6
1973	6.7	6.0	25.5	38.2	10.5	5.7	14.2	2.7	8.5	7.1	13.2	61.8	13.1	16.1	29.2	30.1	69.9
1974	7.1	7.1	28.7	42.9	11.5	9.9	14.6	2.8	11.3	5.1	1.9	57.1	13.2	21.3	34.4	25.9	74.1
1975	6.7	5.9	26.0	38.5	11.7	11.9	12.0	1.9	12.9	8.0	3.0	61.5	12.5	16.6	29.0	29.7	70.3
1976	6.8	5.4	24.2	36.3	10.7	15.7	10.0	1.4	12.3	10.1	3.4	63.7	11.0	17.6	28.6	32.9	67.1
1977	6.4	4.4	22.8	33.6	13.1	17.4	8.0	1.1	11.7	11.9	3.1	66.4	10.0	17.5	27.5	33.3	66.7
1978	6.1	4.0	21.2	31.3	14.7	18.7	8.5	0.7	10.6	12.6	3.0	68.7	9.5	18.7	28.1	33.0	67.0
1979	6.6	4.5	22.0	33.1	14.3	20.7	7.4	0.5	9.9	10.7	3.3	66.9	8.0	17.6	25.6	34.5	65.5
1980	6.8	4.0	22.6	33.4	13.5	23.1	6.4	0.0	13.8	6.1	3.5	66.6	6.6	13.4	20.0	40.6	59.4
1981	5.4	3.1	19.0	27.5	5.3	25.8	5.1	0.0	20.6	11.4	4.3	72.5	5.8	11.5	17.2	50.6	49.4
1982	4.6	2.2	13.1	19.9	6.0	25.8	8.1	0.0	28.9	6.6	4.7	80.1	5.5	14.5	20.0	59.4	40.6
1983	2.9	1.7	8.8	13.4	7.0	28.5	7.3	0.0	32.3	7.3	4.2	86.6	3.7	15.0	18.7	64.9	35.1

Source: Table VIII.2.1.Observations: (1) include all other commercial banks and federal and state savings banks

240

Table VIII.8.3. Loans to the private sector: in 1967 million cruzeiros and growth rates

	Banking System			Non-Banking System											TOTAL
	Banco do Brasil	Other Comm. Banks	Total	Finance companies	Investment Banks	BNH[a]	HCC	SLA	CE	BNDE(S)[a]	BDE	PIS	BNCC	Total	
1967-73	28.8	21.2	23.7	40.3	55.0	42.6	72.2	104.3	37.7	26.2	89.8		12.5	49.5	34.8
1974-80	5.3	6.3	5.9	-5.8	6.5	-16.4	9.8	19.8	13.1	14.6	14.0	-21.8	21.0	10.3	8.6
1981-83	-18.3	0.4	-5.9	29.1	-9.2	27.7	19.5	-17.8	11.3	17.0	4.2	-19.2	13.9	10.0	2.9
1970	8550	13591	22141	3659	3121	2105	1300	193	2451	1493	373	n.a.	76	21984	44125
1971	10475	16380	26855	5968	4496	2708	1876	265	3147	1308	531	43	89	29669	56524
1972	12033	20382	32415	7870	7687	2407	3479	571	3992	1322	910	268	87	41589	74005
1973	15709	25559	41268	12438	10477	2549	5104	916	5758	1673	1402	869	95	59823	101091
1974	21675	29302	50978	12091	10927	2496	6436	1299	7770	4201	2130	1356	149	74178	125156
1975	27892	34579	62471	12632	13277	2479	7190	1692	11553	6598	3003	959	289	94332	156803
1976	31861	36789	68650	11534	13676	2617	8495	2379	15267	8509	4149	934	328	112762	181411
1977	33216	39289	72505	10344	14839	3027	9853	2984	16164	9470	4642	736	295	125587	198092
1978	32927	44478	77405	12008	16009	3611	10667	3524	17296	10817	5079	623	291	141602	219007
1979	35202	49314	84516	11629	17948	4109	11626	4027	17162	11453	5363	491	373	151409	235925
1980	29547	42360	71907	8475	15936	852	11274	3850	16287	9508	4680	310	467	133689	205596
1981	23543	41536	65079	7702	15526	925	13562	4193	17944	9934	5179	234	230	75429	140507
1982	20530	42169	62699	13613	14129	1395	17207	3390	21679	12424	5740	203	432	90212	152911
1983	15724	41856	57580	12839	12797	1510	19359	2833	22228	13600	5626	153	298	91244	148824

Source: 1966-72: Banco Central do Brasil, Monthly Bulletin, 10(1), January 1974; 1973-79, idem, 16(1); 1980-83, idem, 20(2), February 1984.

Observations: (*) includes loans to public enterprises (as in the statistics of Brazil's central bank); (a) net lending which equal total lending minus funds intermediated to other financial institutions.

Abbreviations: BNH = National Housing Bank; CE = savings banks; BNDE(S) = National Social and Economic Development Bank; BNCC = National Agricultural Credit Bank.

Table VIII.8.4. Loans to the private sector: percentage of total loans[*]

Year	Banking System			Non-Banking System											% of GNP	
	Banco do Brasil	Other Comm. Banks	Total	Finance companies	Investment Banks	BNH[a]	HCC	SLA	CE	BNDE(S)[a]	BDE	PIS	BNCC	Total	Banking System	Other financial institutions
1970	19.4	30.8	50.2	8.3	7.1	4.8	2.9	0.4	5.6	3.4	0.8	0.0	0.2	49.8	20.4	40.6
1971	18.5	29.0	47.5	10.6	8.0	4.8	3.3	0.5	5.6	2.3	0.9	0.1	0.2	52.5	22.1	46.6
1972	16.3	27.5	43.8	10.6	10.4	3.3	4.7	0.8	5.4	1.8	1.2	0.4	0.1	56.2	23.4	53.4
1973	15.5	25.3	40.8	12.3	10.4	2.5	5.0	0.9	5.7	1.7	1.4	0.9	0.1	59.2	24.5	60.0
1974	17.3	23.4	40.7	9.7	8.7	2.0	5.1	1.0	6.2	3.4	1.7	1.1	0.1	59.3	26.6	65.3
1975	17.8	22.1	39.8	8.1	8.5	1.6	4.6	1.1	7.4	4.2	1.9	0.6	0.2	60.2	29.6	74.2
1976	17.6	20.3	37.8	6.4	7.5	1.4	4.7	1.3	8.4	4.7	2.3	0.5	0.2	62.2	28.4	75.0
1977	16.8	19.8	36.6	5.2	7.5	1.5	5.0	1.5	8.2	4.8	2.3	0.4	0.1	63.4	27.9	76.3
1978	15.0	20.3	35.3	5.5	7.3	1.6	4.9	1.6	7.9	4.9	2.3	0.3	0.1	64.7	28.4	80.4
1979	14.9	20.9	35.8	4.9	7.6	1.7	4.9	1.7	7.3	4.9	2.3	0.2	0.2	64.2	28.6	80.0
1980	14.4	20.6	35.0	4.1	7.8	0.4	5.5	1.9	7.9	4.6	2.3	0.2	0.2	65.0	23.3	66.7
1981	16.8	29.6	46.3	5.5	11.1	0.7	9.7	3.0	12.8	7.1	3.7	0.2	0.2	53.7	22.6	48.9
1982	13.4	27.6	41.0	8.9	9.2	0.9	11.3	2.2	14.2	8.1	3.8	0.1	0.3	59.0	21.9	53.4
1983	10.6	28.1	38.7	8.6	8.6	1.0	13.0	1.9	14.9	9.1	3.8	0.1	0.2	61.3	20.8	53.9

Source: 1966-72: Banco Central do Brasil, Monthly Bulletin, 10(1), January 1974; 1973-79, idem, 16(1); 1980-83, idem, 20(2), February 1984.

Observations: (*) includes loans to public enterprises (as in the statistics of Brazil's central bank); (a) net lending which equal total lending minus funds intermediated to other financial institutions.

Abbreviations: BNH = National Housing Bank; CE = savings banks; BNDE(S) = National Social and Economic Development Bank; BNCC = National Agricultural Credit Bank.

Table VIII.8.5. Asset rates (%)

	Non-indexed assets[1]						Indexed rates[1]					
Year	Discount rates		Time deposits Banks[2]		Treasury Bills (LTN)		Bills of Exchange		Savings deposits[2]		Treasury Bonds (ORTN)	
	(1)		(2)		(3)		(4)		(5)		(6)	
	Nom.	Real	Nom.	Real	Nom.	Real	Nom.	Real	Nom.	Real	Nom.	Real
1970	20.0	0.2	24.3	3.8	n.a.	n.a.	28.8	7.5	26.9	5.9	25.6	4.9
1971	20.0	0.0	24.3	3.6	18.0	-1.7	28.0	6.6	27.6	6.3	28.7	7.2
1972	20.0	2.3	24.0	5.7	15.9	-1.2	24.2	5.8	20.8	3.0	21.3	3.4
1973	19.0	3.6	21.0	5.3	13.9	-0.9	22.0	6.2	26.2	9.8	18.8	3.4
1974	18.0	-8.3	27.4	-1.0	16.2	-9.7	27.0	-1.3	38.1	7.3	39.3	8.3
1975	18.0	-7.7	27.1	-0.6	18.4	-7.4	26.6	-1.1	36.0	6.4	30.2	1.8
1976	23.0	-12.9	33.5	-5.5	29.4	-8.4	39.2	-1.4	41.9	0.5	43.2	1.4
1977	29.0	-9.6	45.9	2.3	31.9	-7.5	42.9	0.2	43.0	0.3	36.1	-4.6
1978	31.5	-5.2	45.9	5.2	34.1	-3.3	47.8	6.5	41.5	2.0	42.2	2.5
1979	33.0	-13.6	51.2	-1.8	23.4	-19.8	49.9	-2.6	49.9	-2.7	53.2	-0.5
1980	35.5	-32.3	56.9	-21.6	47.5	-26.3	82.3	-9.0	64.0	-18.1	56.8	-21.7
1981	70.0	-19.0	94.3	-7.4	71.2	-18.4	84.6	-12.0	98.0	-5.7	89.7	-9.6
1982	80.0	-7.9	103.6	4.2	79.2	-8.3	110.5	7.7	105.1	4.9	120.7	12.9
1983	100.0	-21.4	152.9	-0.6	104.1	-19.8	180.0	10.0	172.5	7.1	196.6	16.5

Sources: col. 1: Goldsmith, 1986, p. 417; col. 2: Banco central do Brasil, Monthly Bulletin, 13(3), March 1977, pp. 96-7; cols. 3-6: Banco Central do Brasil, op. cit., pp. 96-97.
Observations: (1) real rates deflated by the general price index (IGP-DI) as in Table VI.1; (2) data for the savings deposits in the federal savings bank (Caixa Econômica Federal); (2) rates paid on time deposits by banks and associated investment banks.

Table VIII.8.6. Loan rates and spreads between lending and borrowing rates (%)[1]

Year	Working capital		Discount of firms' bonds (desconto de duplicatas)		Resolution 63		Subsidised loans to small and medium enterprises		Finance companies[2]		Spreads[3]	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal		Banks	Finance cos.
1967	34.9	4.9	...	...	40.2	9.0	n.a.	n.a.	60.3	24.7	32.6	22.1
1968	34.1	8.0	...	...	60.2	29.0	n.a.	n.a.	56.4	25.9	29.3	20.7
1969	33.7	11.3	...	...	34.2	11.7	n.a.	n.a.	53.2	27.5	28.2	19.3
1970	30.9	9.3	...	...	30.7	9.1	n.a.	n.a.	54.5	29.0	5.3	20.0
1971	31.0	9.1	...	...	46.5	22.1	n.a.	n.a.	53.6	28.0	5.4	20.0
1972	32.0	12.5	...	...	32.4	12.9	n.a.	n.a.	49.0	27.0	6.5	20.0
1973	34.0	16.6	28.4	11.7	34.6	17.1	21.7	5.9	44.6	25.8	10.7	18.5
1974	38.5	7.6	32.9	3.3	49.9	16.5	21.7	-5.4	47.6	14.7	8.7	16.3
1975	39.7	9.2	43.9	12.5	57.0	22.7	21.7	-4.9	44.4	12.9	9.9	14.1
1976	52.9	8.3	57.7	11.7	56.8	11.0	21.7	-13.8	65.5	17.2	14.5	18.9
1977	59.7	11.9	63.7	14.7	49.4	4.7	21.7	-14.7	71.5	20.2	9.5	20.0
1978	70.4	22.8	69.7	22.3	68.5	21.5	21.7	-12.3	76.5	27.2	16.8	19.4
1979	83.5	19.2	87.6	21.9	187.1	86.5	21.7	-20.9	79.5	16.6	21.4	19.7
1980	88.0	-6.1	110.0	4.9	105.9	2.8	29.9	-35.1	92.9	-3.7	19.8	5.8
1981	141.7	15.2	160.1	23.9	162.4	25.0	50.8	-28.1	176.3	31.7	24.4	49.7
1982	160.3	33.2	223.9	65.7	248.9	78.5	72.2	-11.9	234.6	71.2	27.8	59.0
1983	266.8	44.1	279.7	49.2	333.2	70.2	160.3	2.3	270.4	45.5	45.0	32.3

Sources: col.1-3: Banco Central do Brasil, Monthly Bulletin, 12(4), April 1976. col. 4: *Revista Cenarios*, October, 1990; resolution 63 loan rates were estimated from 1971 to 1972 using nominal LIBOR rate (r_L), the rate of change of the implicit exchange rates (e), the rate of inflation in Brazil (p) and the average of the spreads from 1967 to 1970 (s) and the following formula $r_{63} = \{(1+r_L).(1+p).(1+e).(1+s)\}-1$; col. 5: from 1964 to 1966 - Christoffersen, 1968, p.50; from 1967 onwards, Banco Central do Brasil, op. cit.
Observations: (1) real rates obtained by deflating nominal rates by the general price index (IGP-DI); (2) until 1970 loans to working capital; from then on, consumer credit rates; (3) obtained as follows: $r = ((1+r_l)/(1+r_d))-1$ where r_l stands for the loan rate and r_d, for the deposit rate.

Table VIII.9. Some indicators of the use of external funds to finance internal accumulation

Year	Current Account[1]					Capital inflows[1]							Res[1]					Total debt
	RRT	Cost of capital				TOTAL	Transfers	Financial flows				Total						
		Interest	Amort.	π & div.	Total			FDI	MLT	ST	Other			RRT/GNP	RRT/CI	CC/CI	Res/CI	
1967	-0.06	-0.18	-0.44	-0.07	-0.70	-0.76	0.08	0.08	0.53	-0.01	-0.20	0.47	0.29	1.1	0.1	1.5	-0.61	3.28
1968	-0.30	-0.14	-0.48	-0.08	-0.71	-1.01	0.02	0.06	0.58	0.00	0.37	1.03	-0.02	4.5	0.3	0.7	0.02	3.78
1969	-0.05	-0.18	-0.49	-0.08	-0.76	-0.81	0.03	0.18	1.02	0.18	-0.06	1.35	-0.55	0.6	0.0	0.6	0.41	4.40
1970	-0.23	-0.23	-0.67	-0.12	-1.03	-1.26	0.02	0.13	1.43	0.08	-0.03	1.63	-0.38	2.4	0.1	0.6	0.23	5.30
1971	-0.90	-0.30	-0.85	-0.12	-1.27	-2.17	0.01	0.17	2.04	0.49	-0.05	2.65	-0.48	8.6	0.3	0.5	0.18	6.62
1972	-0.97	-0.36	-1.20	-0.16	-1.72	-2.70	0.01	0.32	4.30	0.02	0.42	5.07	-2.37	7.8	0.2	0.3	0.47	9.52
1973	-1.00	-0.51	-1.67	-0.20	-2.38	-3.39	0.03	0.94	4.50	-0.20	0.27	5.53	-2.15	5.4	0.2	0.4	0.39	12.57
1974	-6.22	-0.65	-1.92	-0.25	-2.82	-9.04	0.00	0.89	6.89	0.46	-0.15	8.10	0.95	23.0	0.8	0.3	-0.12	17.17
1975	-4.97	-1.50	-2.17	-0.23	-3.90	-8.87	0.00	0.89	5.93	1.55	-0.44	7.93	0.94	14.6	0.6	0.5	-0.12	21.17
1976	-3.83	-1.81	-2.99	-0.38	-5.18	-9.00	0.00	0.96	7.77	1.11	0.30	10.14	-1.14	10.7	0.4	0.5	0.11	25.99
1977	-1.48	-2.10	-4.06	-0.46	-6.62	-8.10	0.00	0.81	8.42	0.30	-0.83	8.71	-0.61	3.7	0.2	0.8	0.07	32.04
1978	-2.83	-2.70	-5.32	-1.54	-9.56	-12.38	0.07	2.05	13.81	1.58	-0.85	16.66	-4.28	6.1	0.2	0.6	0.26	43.51
1979	-5.22	-4.19	-6.38	-1.36	-11.93	-17.14	0.02	2.21	11.23	0.76	-0.40	13.82	3.32	9.8	0.4	0.9	-0.24	49.90
1980	-5.94	-6.31	-5.01	-0.72	-12.04	-17.99	0.17	1.53	10.60	2.72	-0.54	14.48	3.51	10.5	0.4	0.8	-0.24	53.85
1981	-1.66	-9.16	-6.24	-1.11	-16.51	-18.17	0.20	2.33	15.55	1.23	-0.48	18.82	-0.65	2.7	0.1	0.9	0.03	61.41
1982	-2.81	-11.35	-6.95	-2.14	-20.45	-23.25	-0.01	2.55	12.52	-0.06	3.99	18.98	4.27	4.6	0.1	1.1	-0.23	70.20
1983	4.06	-9.56	-6.86	-1.45	-17.87	-13.81	0.11	1.36	6.71	1.07	5.12	14.36	-0.55	-11.7	-0.3	1.2	0.04	81.32

Source: Balance of Payments data: IBGE, 1985, pp. 539; external debt: idem, 543-4.

Observations: (1) in billion current dollars.

Abbreviations: RRT = real resources transfers, which includes trade balance and net payments of non-factors; π & div. = profits and dividends (net); FDI = foreign direct investment (net); MLT = medium and long-term loans; ST = short-term loans; CI = capital inflows; CC = capital costs; Res = changes in the international reserves held by the central bank.

Table VIII.10. Some indicators of the vicious circle of the monetary policy and the link between public and foreign debts

Year	Net issues of government bonds (LTN and ORTN)	Treasury deficit	Financial cost over deficit		Public debt ORTN[b,c]	LTN[b,c]	Total	Foreign debt[b]	
	(1)	(2)	(3)	(1)/(2)	(4)	(5)	(4)/(5)	(5)	(6)
1967	448	-1225	...	0.0004	0.96	n.a.	0.96	3.78	25.48
1968	93	-1227	...	0.0001	1.08	n.a.	1.08	4.40	24.47
1969	797	-756	...	0.0010	1.48	n.a.	1.48	5.30	27.93
1970	2282	-738	...	0.0031	2.21	0.16	2.38	6.62	35.93
1971	2987	-672	...	0.0044	2.21	0.74	2.95	9.52	31.02
1972	6826	-512	...	0.0133	2.71	1.73	4.45	12.57	35.38
1973	5757	295	...	-0.0195	3.43	2.85	6.27	17.17	36.54
1974	-2595	3382	...	0.0008	4.91	2.21	7.12	21.17	33.63
1975	31649	73	20.5	-4.3355	7.58	4.72	12.30	25.99	47.35
1976	10814	423	30.1	-0.2557	8.05	6.62	14.67	32.04	45.80
1977	22136	1043	28.7	-0.2122	8.68	8.80	17.47	43.51	40.16
1978	9359	4872	30.7	-0.0002	9.24	11.02	20.26	49.90	40.60
1979	-4037	2296	31.1	0.0002	9.85	10.59	20.44	53.85	37.96
1980	57834	2035	30.6	-0.2842	11.72	5.15	16.87	61.41	27.47
1981	912002	615	41.0	1482.9	22.40	12.43	34.82	70.20	49.61
1982	666457	331	51.1	2013.4	39.35	8.99	48.34	81.32	59.45
1983	256000	6596	63.4	38.8114	38.78	8.82	47.60	91.09	52.26

Source: cols. 1-2 from 1964 to 1980, Zini (1982), p. 258; from 1981 to 1983, FUNDAP, 1988, p. 209; col. 3: FUNDAP, 1988, p.212; cols. 4-6: Table VIII.3; col. 6: Table VIII.9;

Observation: (a) in current Cr$ million; (b) in US$ billion; (c) deflated by the implicit rate of exchanges as in IBGE, 1985, p.525.

Table VIII.11. Some indicators of the level of indebtedness and financial vulnerability of the corporate sector (by ownership of capital)[20]

Year	Debt-equity ratios									
	1969	1972	1975	1977	1978	1979	1980	1981	1982	1983
All firms	0.88	1.00	1.25	1.32	0.95	1.09	1.16	1.11	1.03	1.12
Private nationals	1.00	1.17	1.45	1.43	0.95	1.11	1.22	1.23	1.18	1.32
Foreign firms	0.82	1.17	1.45	1.43	0.93	0.96	0.93	0.83	0.72	0.68
State enterprises	0.8	0.82	0.91	1.15	0.96	1.09	1.16	1.11	1.03	1.12
	Financial costs as percentage of the net operating income									
All firms	3.44	3.54	5.33	6.9	7.2	18.1	13.7	20.3	24.8	33.1
Private nationals	3.30	3.28	4.97	5.59	5.8	8.0	7.4	8.8	4.3	4.9
Foreign firms	3.57	3.43	5.1	6.78	5.2	7.0	5.7	7.9	9.1	12.1
State enterprises	4.22	7.32	10.75	18.16	10.5	37.9	26.3	39.4	49.3	64.1

Source: 1969-77: Zini (1984), p.87; 1978-83: *Conjuntura Economica*, April 1985, pp. 70-3.

---

[20] It is important to observe that the data presented in this table are only compatible (in what concerns the size of sample and coverage) within periods 1969-77 and 1978-83. The data for the period 1969-77 cover a sample of 3790 obtained from the archives of the *Secretaria da Receita Federal* (Treasury) of corporate tax declarations; even though the data was summarised in Zini (1984), see Zini (1982) for the methodology of estimation of the data. The data for the period from 1978 to 1983 period cover samples of the biggest corporate firms within their sectors, and the sizes of the samples are: private national firms= 793; foreign firms= 88; state enterprises= 119; total= 1000; the methodology of aggregation of such data is found in *Conjuntura Economica*, op.cit., pp. 68-9.

IX. CONCLUSION

IX.1. INITIAL REMARKS

Every work in social science, theoretical or empirical, begins with a pre-scientific view of the subject under analysis. In our case, this view has been greatly influenced by Keynes's famous metaphor about the relation between investment and finance:

> The spectacle of modern investment markets has sometimes moved me towards the conclusion that to make the purchase of an investment permanent and indissoluble, like a marriage, except by reason of death or other grave cause, might be a useful remedy for our contemporary evils. For this would force the investor to direct his mind to the long-term prospects and to those only. But a little consideration of this expedient brings us up against a dilemma, and shows us how the liquidity of investment markets often facilitates, though it sometimes impedes, the course of new investment. For the fact that each individual investor flatters himself that his commitment is "liquid" (though this cannot be true for all investors collectively) calms his nerves and makes him more willing to run a risk. If individual purchases of investments were rendered illiquid, this might seriously impede new investment, so long as *alternative ways* in which to hold his savings are available to the individual. This is the dilemma. So long as it is open to the individual to employ his wealth in hoarding or lending *money*, the alternative of purchasing actual capital assets cannot be rendered sufficiently attractive (especially to the man who does not manage the capital assets and knows very little about them), except by organising markets wherein these assets can be realised for money (Keynes, 1936: 161).

In this conclusion, Keynes's metaphor can be used to explain the view that guided this thesis. As Keynes noted, in an early stage of capitalism, the act of investing was inseparable from the act of saving. This double act was performed by one entrepreneur or a group of entrepreneurs whose animal spirits prompted them to

accumulate beyond the wealth previously obtained. Investment represented a long-term, irrevocable financial and personal commitment for the entrepreneur which, as in marriage, was irrevocable.

This changed fundamentally with the development of the financial structure. To start with, the creation of banks with credit-creating capacity permitted that investment projects be undertaken independently of and prior to the accumulation of savings. This form of finance substantially increased the capitalist system's capacity to accumulate. In turn, this meant that, at least in its first stages, the marriage between finance and investment had to have the blessing of a bank. The bank's credit policy becomes the second most important causal agent in the dynamics of accumulation of capitalism.

A second important innovation which occurred in some countries (e.g. the United States and England) was the organisation of markets for shares and long-term securities. This innovation produced a further enhancement of banks' capacity to finance accumulation, as it opened up the possibility of mitigating the risk of long-term financial commitment. That is, now entrepreneurs could borrow short from banks with the prospect of funding their short-term debt by later issuing shares or long-term securities. For wealth-owners, the development of organised markets and the continuous trading in the secondary markets permitted them to hold equities without having to commit themselves to the marriage between finance and investment. In other words, with the existence of organised markets for securities, banks still had to give their blessing for the wedding, but now they could count on the mechanisms of funding to restrict the scope of their godfatherly obligations of keeping the marriage together.

Having described the view that guided this thesis, we are now in position to summarise what was done in this thesis, starting with the theoretical part.

IX.2. THE THEORETICAL BACKGROUND

Chapter I has established that the common assumption behind most models of finance and economic development is the so-called 'prior-saving' assumption. To use the above mentioned metaphor, the mainstream view assumes that savers continue

to be the bride in the marriage between finance and investment in an economy with a developed banking system. The financial systems have the important, though ancillary role, of arranging the wedding place (market) and acting as marriage-brokers, providing the information to both groom and bride so that they can evaluate the prospects of their marriage. Failures to achieve optimal levels of marriages must be only due to either lack of information and financial repression or both.

In our opinion, the problem about such approach is neither the realism of the assumptions which lead to the view of long-term neutrality of money, nor the internal consistency of the models (this is hardly a good front of attack against neoclassical models). A more appropriate attack must fall on the paradigm used to depict modern capitalist economies which disregards completely the fundamental changes of the dynamics of accumulation which have been introduction by institutional evolution as regards the way such an accumulation is financed. In other words, it disregards the fact that with a credit-creating banking system, it is banks, and not savers, which finance investment. It is the bankers' decisions to finance and the entrepreneurial long-term expectations which are now the main determinant in the process of accumulation. Because it wrongly identifies the real source of finance, the prior-saving argument is misleading, and can be quite dangerous when used as basis for policy.

In **Chapter II** we used Keynes's concept of 'monetary-production economy' as a paradigm on which to base our view on finance and growth. For Keynes, a market economy is better described as one in which the means of production are privately owned and output is organised by a profit-seeking class of entrepreneurs. Production decisions are necessarily forward-looking, and therefore entrepreneurial expectations are the main determinants of output and employment. Among those expectations, long-term expectations are the most volatile as the gap between the entrepreneur's decision to invest and the return on such an investment is more uncertain. This potential volatility and the fact the investment is one of the two reasons which permitted Keynes to single it out as the *causa causans* in the dynamics of a market economy. The second one is the fact, unlike other sources of demand (such as consumption), investment finance is independent of previous saving or

current income.[21]

Having established the paradigm on which our analysis is based, **Chapter III** presented our view on the role of banks and financial markets in the determination of investment and growth. First, a stocks and flows model was used to confirm conclusively Keynes's and the Post Keynesians' assumption that banks, and not savers, are the main actors in the process of financing investment. Second, we showed that even though bank credit is essential to growth, the liability structure of banks does not normally allow to provide long-term finance to investors. This means that, for the economy as a whole, credit permits the accumulation of illiquid assets, which are financed by a revolving fund of liquid assets. Third, we show that this type of financing tends to increase lender's and borrower's risk and the degree of systemic financial fragility. This can halt growth for microeconomic as well as for macroeconomic reasons: as regards the former, both banks and entrepreneurs may fear to expand even further their financial vulnerability; as regards the latter, financial fragility may deteriorate into financial instability as liquidity preferences of the lending institutions and borrowers rise. This is where the question of **funding** (i.e. the transformation of short-term debt into long-term position by issuing securities or equities) becomes so fundamental. It is funding which re-establish the conditions for the marriage between the maturities of finance and investment, and therefore permits a more financially stable growth.

In the same chapter we show that, because of the inherent uncertainty of real-life economies, 'savers' are normally interested in acquiring financial assets as 'liquidity time machines' (Davidson, 1982) and not as a long-term commitment. Thus the above-mentioned marriage can only take place if the acquisition of long-term securities does not eliminate its holder's 'power of disposal'. It is here that financial markets play an important role, as the continuous trading in the secondary markets allow the holding of assets which are illiquid for the community as a whole to be 'liquid' for the individual. Holdings of these assets represent saving: saving funds accumulation. Thus we established, from a Post Keynesian perspective, the role of

---

[21] The existence of consumer credit facilities nowadays does not invalidate the causality proposed by Keynes, for the first criterion - that is, the dependency on more volatile long-term expectations - is still valid for investment and for consumption.

saving and financial markets in supporting growth. This positive role, however, must be balanced with the potentially destabilising effects of speculation in those markets - which is the dilemma to which Keynes refers to in the quotation above.

Having defined the roles of banks and financial markets in the process of growth, we offered the concept of functionality as a criterion to analyse financial markets as a counterpart to the neoclassical concept of an 'efficiency'. Functionality exists if, independently of its specific institutional characteristics, the financial system:

(1) has credit-creating capacity and this capacity is used to accommodate the additional demand for credit related to investment finance motive and to additional transactions demand;

(2) has funding capacity which will reduce the increasing borrower's and lender's risks and reduce the risk of financial fragility which is inherent in the process of growth;

(3) can maintain robustness throughout the process of growth, ensuring that increasing financial fragility does not degenerate into financial instability.

(4) can avoid over-borrowing in foreign currency, reducing to the minimum required the financial vulnerability of the economy to changes in credit conditions abroad.

Having established the theoretical reasons for the differentiation between finance and saving for a closed economy, we concluded chapter III by showing that this distinction must also be made in the analysis of the role of foreign capital flows in the financing of internal accumulation.

This story thus far depicts the basic institutional background with which Keynes developed his views on the finance and funding of accumulation in a developed market economy. This also allowed him to indicate the weakness of such a system through his theory of speculation. More recently, Minsky and others have used this institutional background to indicate the shortcomings of the financial basis of capitalist accumulation, which is inherently financially fragile. However, history shows that many other forms of organising the financial system can enhance the functionality of credit-based financial systems. For that, compensating structures or a consistent financial policy, or preferably both, must exist. This was the topic of **Chapter III.**

In this third chapter, Zysman's (1983) classification of financial system into credit-based and capital market-based structures is used to point out (from the Post Keynesian perspective developed thus far) the weaknesses and strengths of different financial structures. Further, we indicated that a fast-developing economy will tend to develop a credit-based financial system for three reasons. First, growth depends on additional credit, whatever the existing type of financial structure. Second, if growth is high, then even if the marginal propensity to buy placements out of households' saving is high enough, long-term funds will not be available to fund all existing outstanding short-term debt. Third, if development creates constant excess demand for financing short-term operations (working capital, for instance), financial institutions (especially banks) will have no competitive stimulus to finance long-term investment or to promote funding. Credit-base financial systems cannot support high levels of growth unless other financial arrangements are created to overcome the lack of mechanisms to fund investment and the increasing financial fragility inherent in growing economies. In many LDCs the process of growth and structural change proceeds faster than one can expect the financial structure to develop, especially as regards the capacity to fund ongoing investments. This means that, unless other arrangements to overcome the gap between financial and economic development exist, growth will be constantly constrained by the lack of sources for financing or by surges of financial instability.

Chapter V marked the transition between the theoretical and applied parts of the thesis. It summarised the story of Brazil's development from 1947 to 1983, concentrating on the relation between real and financial development, with three aims: (1) to justify concentrating on this period, in particular to justify stopping in 1983; (2) to indicate the questions raised by applying the approach of the first four chapters to this period of Brazilian economic experience; (3) to indicate the method of analysis. Having done this, we were in position to begin our analysis of the Brazilian case-study.

IX.3. THE LESSONS FROM BRAZIL

The Brazilian financial reform was used as an illustration of how a reform, based on the misleading prior-saving argument and attempting rapidly to develop a private capital markets at all costs, can be very destabilising in what concerns the long term prospects of growth.

Chapter VI presented an analysis of the period 1947-66. During the period 1947-61, Brazil lacked developed mechanisms to finance and fund accumulation. Long-term finance was limited to two government banks, whereas private lending institutions confined their operations to short-term loans for working capital. Financial markets were poorly developed and dealt in few securities. Finally, access to foreign loans was limited to official loans from governments and multilateral agencies. Despite the shortcomings of the financial structure, the Brazilian economy grew 7.6% per year on average and investment over GNP was 15.8% between 1947 and 1961. This extraordinary growth changed the economy from a primary exporter with a nascent non-durables industrial sector into a relatively mature economy with a small import coefficient, diversified consumer non-durables and durables sectors and a budding capital goods sector. Lacking developed long-term financing, during the period from 1947 to 1961 the bulk of the finance was provided by a macroeconomic mechanism which articulated the financing of public investment with the self-financing of private firms. This process causally began with the financing of government deficit, though an association of extra-budgetary taxation and monetary expansion. Private firms could count on short-term loans provided by the commercial banking system, finance companies and even the incipient curb market for acceptances. However, such loans could only be rapid given the continued increase of nominal demand generated by the financing of government deficits and the high levels of mark-up in the Brazilian industrial sector. This mechanism could only be sustained if the government continued to finance its increasing expenditure and deficits by additional money creation, and if firms could keep their prices growing at a faster pace than their costs. With escalating inflation, however, it becomes difficult for firms to keep increasing their mark-ups and for the government to augment their expenditure without increasing taxation or taking recourse to bond-

issuing. Without the stimulus of government expenditure and money creation, the scheme creaks down and firms are forced to try to increase their mark-up even further. This creates an inflationary pressure and enlarges the overall fragility of the financial system. This is one of the main features of the slow-down during the 1960s, which was also analysed.

Chapter VII began by restating the fact that the gap between financial and economic development in the 1950s was greatly responsible for the downturn observed from 1962 onwards. The continuity of development required an appropriate medium-term financing mechanism so that the demand for consumer durables could expand sufficiently to absorb the capacity created in the previous years. It also required long-term financing mechanisms in order to finance the deepening of the process of import-substitution. In other words, a new articulation between the financial and the productive spheres was needed.

The chapter further discussed the reforms implemented by the group of neo-classical economists brought to power by the 1964 military coup. As was consistent with their neoclassical background, this group believed that the required partnership between the financial and productive spheres had to be based on the stimulus of individual saving. The reformers blamed the usury law and inflation for the negative real rates paid to savers; and the lack of competition and inefficiency of the financial structure for the increasing gap between deposit and loan rates. The solution proposed for the problem was three-fold. Firstly, in order to reduce inflation the government introduced a severe stabilisation programme. Secondly, in order to raise savers' interest rates, the government indexed its bonds and loans, and dictated that the private financial institutions did the same with theirs. Finally, to increase the competition and efficiency of the financial system, the reform promoted a segmentation of its structure according to the maturity of assets and loans, and facilitated the access of firms to foreign indebtedness.

The financial reforms did succeed in enhancing the sources of finance for government expenditure, consumption and residential construction. In this way, it contributed to the economic boom from 1967 to 1973. However, the reform also introduced some structural dysfunctionalities into the financial system, such as the tendency towards the short term, speculation and foreign indebtedness beyond the real

255

need for the development of the country. On top of these dysfunctionalities, the private mechanisms of investment finance and funding continued to be underdeveloped despite all effort to develop them during and after the reform.

Already in 1970, the symptoms of the continuing deficiency of the financial system were visible. These took the form of increasing speculation and the accumulation of foreign debt far above that needed to finance the real resource transfers from abroad. But it was with the oil shock of 1973 and the decision of the Brazilian government to adjust to the shock by expanding the process of import substitution, that the shortcomings of this system were revealed to their full extent. This was the topic of chapter VII.

Chapter VII concluded our applied work by showing the financial consequences of the reforms of 1964-66. First, we showed that the failure of government attempts to impose indexation to the private institutions, created a severely fragmented financial system where indexed and non-indexed assets coexisted. This coexistence increased the scope for speculation and the fragility of the system. Second, we indicated that the highly speculative financial markets and the persistence of inflation increased, rather than reduced, the risk-aversion of financial institutions and savers. So the private financial system continued to be dominated by short-term operations. The longer term credit, such as the financing of industrial investment and civil constructions was left to the State.

After 1974, government continued with the growth-*cum*-debt strategy, this time explicitly stimulating public enterprises to borrow in order to finance their investment projects associated with the Second National Development Plan. The inadequacy of financial system that emerged after 1964-5 reform and consequences for the developments in the 1970s are overlooked by the existing literature in view of the intensity of the disequilibria caused by the subsequent oil shocks and the interest rate shock. The importance of those shocks is not de-emphasised in our analysis. But focus is placed on the constraints, imposed by the financial structure, in overcoming the challenges of the 1970s. This role is associated with the structural weakness of the system, which was reinforced by the misleading approach followed by the 1964-66 financial reform.

IX.4. FINAL REMARKS

Again it is possible to use Keynes's metaphor quoted in the beginning of this chapter to understand what happened in Brazil in the period under analysis. In the 1950s, private mechanisms to finance accumulation did not exist. The development of such mechanisms is definitely linked to the State's increasing role in leading the process of industrialisation. In the period, then it is the State which promoted the flirting between its own banking system and development agencies with private and public investment. The flirting never developed into marriage because the need to develop proper mechanism to fund the investment was neglected. Public enterprises had access to long-term financing (through e.g. BNDE and Banco do Brasil) and finance was never a problem to foreign firms, but national private firms had to finance their investment through inflationary mechanisms. As a consequence, the mechanisms to finance accumulation were dependent on inflation not rising above a certain level and, especially, on the government's capacity to continue expanding its investment.

With the conclusion of the main investment projects of the Target Plan (1955-60), the above mentioned mechanisms revealed their shortcomings. As investment was reduced, the highly indebted firms attempted to increase their liquidity positions by raising their mark-ups, which led to an acceleration of inflation. As inflation rose and the level of activity declined, the public deficit became chronic, which increased the already eminent pressure on government for stabilisation. The adjustment programme introduced by the government in 1962-66 increased, rather than reduced the problem.

The financial reforms introduced by the military *junta* from 1964 to 1966 represented the neo-classical response to the need to restructure the financial system. The State again intervened in order to promote the marriage between the financial system and the productive sector, so that accumulation could be resumed. However, unlike in the 1950s, the neo-classical reformers were misguided to choose individual saving as the bride, and the private financial sector as the godfather. In order to stimulate the bride to make a commitment, the government offered high interest rates through the indexation of its own assets and opened up the access of indigenous firms to 'external saving'. Because the decision to finance lies, not on the individual saver,

but on the lending institutions, indexation did not expand the private sources of finance. In contrast, the increase of the rates of interest augmented both lenders' and borrowers' risks, as the financial operation within the private sector became more speculative and more oriented to the short term.

As the bride did not show an intention to commit, the increasing impatience of the interventionist groups within the government led to the increase of the public financial system's role as financier of both public and private accumulation. When the need to resume the process of import-substitution arose in 1973, it is again the State which completely assumes that role, even though the Ministry of Finance continued convinced of the correctness of maintaining high interest rates to stimulate internal saving, to guaranteed inflows of 'external saving' and to maintain price stability. The conjunction of high interest rates and increasing inflation and uncertainty stimulated even further speculation, in which both wealth-holders and the private financial system engaged. Now the bride chosen by the government became an evil mistress, exploiting every opportunity to gain financially from the financial disarray of the State. Because the State has for so long played the leading role in the process of development in Brazil, its imminent bankruptcy dragged the whole economy into the 'lost decade' of the 1980s.

To conclude, it must be said that the financial system still seems to represent a major obstacle to the reassumption of development in Brazil. The fact that other problems (e.g. fighting inflation and restructuring the external debt) are priority now should not stop us from outlining a reform which could enhance the functionality of the Brazil's financial system.

REFERENCES

Akerlof, G. 1970: The Market for Lemons: Qualitative Uncertainty and the Market Mechanism. The Quarterly Journal of Economics, 84, pp. 488-500.

Aglietta, M. 1985: The Creation of Liquidity. In L. Tsoukalis (ed.) The Political Economy of International Money: In Search of a New Order, London: Royal Institute of International Affairs.

Almeida, J.S.G. 1980: As Financeiras na Reforma do Mercado de Capitais: o Descaminho do Projeto Liberal. Unpublished M.A. dissertation, Universidade Estadual de Campinas.

_____ 1984: As Reformas Financeiras de 1964-65: Objetivos, Rumos e Desvios. Faculdade de Economia, Universidade Federal do Rio de Janeiro (FEA-Universidade Federal do Rio de Janeiro), Discussion paper 59.

_____ 1987: O Ajuste Financeiro das Empresas Produtivas na Crise. Instituto de Economia Industrial, Universidade Federal do Rio de Janeiro, Discussion Paper 81, October.

_____ 1988: Instabilidade da Economia e Estrutura Financeira das Empresas no Brasil no Ajustamento Recessivo, Instituto de Economia Industrial, Universidade Federal do Rio de Janeiro, October.

_____ and J. A. Ortega 1987: Financiamento e Desempenho Financeiro das Empresas Industriais no Brasil. Discussion Paper 81, Instituto de Economia Industrial, Universidade Federal do Rio de Janeiro, March.

Amadeo, E.J. 1982: <u>Desemprego, Salários e Preços: Um Estudo Comparativo de Keynes e do Pensamento Macroeconômico da Década de 1970</u>. Rio de Janeiro: BNDES.

_____ 1991: <u>Keynes's Principle of Effective Demand</u>. Aldershot: Edward Elgar.

Amadeo, E.J. and **Franco, G.H.B.** 1988: Finance, Poupança e Investimento: Nem Keynes, Nem Robertson. <u>Pesquisa e Planejamento Econômico</u>, 19(2), pp. 379-86.

Amsden, A.H. and **Euh, Y.** 1990: Republic of South Korea's Financial Reform: What are the Lessons. <u>UNCTAD Staff papers</u>, n. 30, April.

Andersen, T.B. 1983-84. Some Implications of the Efficient Capital Markets Hypothesis. <u>Journal of Post Keynesian Economics</u>, Winter, 6(2), pp. 281-294.

Andrade, J.P. 1988: Motivo Financas ou Motivo Poupança: o Papel Transitório do Crédito em Kalecki. In <u>Ensaios de Teoria Pós-Keynesiana</u>, Universidade Federal do Ceará, Ceará, Brazil.

Asimakopulos, A. 1983: Kalecki and Keynes on Finance, Investment and Saving. <u>Cambridge Journal of Economics</u>, 7, pp. 221-33.

Banco Central do Brasil, 1973: Setor Externo e Desenvolvimento da Economia (External Sector and the Development of [Brazil's] Economy). <u>Bulletin</u>, Special Annexo II, January.

Bain, A.D. 1981: <u>Economics of the Financial System</u>. London: Martin Robertson.

Batista, J.C. 1986: Brazil's Second National Plan and its Growth-cum-Debt Strategy. <u>IEI-UFRJ</u>, Discussion Paper, 93, Rio de Janeiro.

Becker, B.K. and A.G. Egler 1992: <u>Brazil: a New Regional Power in the World-Economy</u>, Cambridge: Cambridge University Press.

Beckerman, P. 1983: Non-Positive Market-Clearing Real Rates of Interest. <u>Journal of Post Keynesian Economics</u>, 6(1), pp. 53-63.

Calabi, A., G.D. Reiss and P.M. Levy. 1981: <u>Geração de Poupanças e Estrutura de Capital da Empresas no Brasil</u>. São Paulo: Instituto de Pesquisas Econômicas, Universidade de São Paulo.

Cameron, R., ed. 1972: <u>Banking and Economic Development: Some Lessons of History</u>. New York: Oxford University Press.

Cameron, R., O. Crisp, H.T. Patrick, and R. Tilly 1967: <u>Banking in the Early Stages of Industrialization</u>. New York: Oxford University Press, 1972.

Carvalho, F.J.C. 1986: <u>Inflation and Indexation in a Post Keynesian Model of Asset-Choice</u>. Ph.D. dissertation, New Jersey, Rutgers University.

_____ 1992: <u>Mr. Keynes and the Post Keynesian: Principles of Macroeconomics for a Monetary Production Economy</u>. Hants, Enlgand: Edward Elgar.

Castro, A.B. and F.E.P. Souza 1985: <u>A Economia Brasileira em Marcha Forçada</u>. Rio de Janeiro: Paz e Terra.

Cavalcanti, C.B. 1988: <u>Transferência de Recursos ao Exterior e Substituição de Dívida Externa por Dívida Interna</u>. Rio de Janeiro: BNDES.

Cencini, A. 1988: <u>Money, Income and Time</u>. London: Pinter Publishers, 1990.

Chenery, H. B. and A. Strout, 1966: Foreign Assistance and Economic Development. The American Economic Review, 4(1) September, pp. 679-733.

_____ 1968: Foreign Assistance and Economic Development: Reply. American Economic Review, 78, pp. 912-16.

Chick, V. 1992: Money, Method and Keynes. London: Macmillan.

_____ 1983: Macroeconomics after Keynes. Oxford: Philip Allan.

_____ 1984: Monetary Increases and their Consequences: Streams, Backwaters and Floods. In A. Ingham and A.M. Ulph (eds), Demand, Equilibrium and Trade: Essays in Honour of Ivor F. Pearce, London: Macmillan. Reprinted in Money, Method and Keynes, pp. 167-179.

_____ 1985: Time and the Wage-Unit in the Method of the General Theory : History and Equilibrium. In Lawson, T. and Pesaram, H. (eds.). Keynes's Economics: Methodological Issues. London and Sidney: Croom Helm.

_____ 1986: The Evolution of the Banking System and the Theory of Saving, Investment and Interest. Economie et Societés (Cahiers de l'ISMEA Serie Monnaie et Production, 3). Reprinted in Money, Method and Keynes, pp. 196-206.

_____ 1990: Some Methodological Issues in the Theory of Speculation. in D.E. Moggridge (ed), Perspectives on the History of Economic Though, vol. 4. Reprinted in Money, Method and Keynes, pp. 167-179.

Chick, V. and S. Dow 1988: A Post-Keynesian Perspective on the Relation Between Banking and Regional Development. Thames Papers in Political Economy, Thames and North East London Polytechnic, spring.

Cho, Y. J. 1986: Inefficiencies from Financial Liberalization in the Absence of Well-Functioning Equity Markets. Journal of Money, Credit and Banking, 18(2), May, pp. 191-199.

Christoffersen, L. E. 1968: Taxas de Juros e a Estrutura de um Sistema de Bancos Comerciais em Condições Inflacionárias: O Caso do Brasil. Revista de Economia Brasileira, 23(2), July, pp. 5-34.

Corbo, V. and **De Melo**, J. 1987: Lessons from the Southern Cone Policy Reforms. Research Observer, 2, July, The International Bank for Reconstruction and Development/The World Bank, pp. 111-135.

Coutinho, L.G. and **Belluzo**, L.G. 1983: Estado, Sistema Financeiro e Formas de Manifestação da Crise: 1929-1975. São Paulo: Ed. Brasiliense.

Cysne, R.P., F. **Lees** and J.B. **Botts** 1990: Banking and financial deepening in Brazil. Basingstoke: Macmillan.

Darity, W. and **Horn**, B.L. 1990: Some Repressed Aspects of the case for Financial Reform in LDCs. Department of Economics, Barnard College, Columbia University, July. Mimeo.

Davidoff Cruz, P. 1984: Dívida Externa e Política Econômica. São Paulo: Brasiliense.

Davidson, P. 1978: Money and the Real World. London: Macmillan, 1972.
_____ 1982: International Money and the Real World. London: Macmillan.
_____ 1986: Finance, Funding, Saving and Investment. Journal of Post Keynesian Economics, 9(1), pp. 101-110.

De Meza, D. and **Webb**, D.C. 1987: Too Much Investment: A Problem of Asymmetric Information, Quartely Journal of Economics, CII(2), May, pp. 280-292.

Díaz-Alejandro, C. 1985: Good-Bye Financial Repression, Hello Financial Crash. Journal of Development Economics, 19(1-2), September-October, pp. 1-24.

Dismoor, J. 1990: <u>Brazil: Responses to the Debt Crisis</u>. Washington D.C.: Inter-American Development Bank.

Dow, S. 1985: <u>Macroeconomic Thought: A Methodological Approach</u>. Oxford and Cambridge: Basil Blackwell.

_____ 1990: <u>Financial Markets and Regional Economic Development</u>. Aldershot: Avebury.

Dow, S. and Earl, P.E. 1982: <u>Money Matters</u>. London: Martin Robertson.

Dreifuss, R. 1984: <u>1964: A Retomada do Poder</u>. Petrópolis: Vozes.

Dutt, A. 1991: Interest Rate Policies in LDCs: a Post Keynesian View, <u>Journal of Post Keynesian Economics</u>, 13(2), Winter 1990-91, pp. 211-231.

Dymski, G.A. 1989: Keynesian Versus Credit Theories of Money and Banking: a Reply to Wray. <u>Journal of Post Keynesian Economics</u>, Fall, 12(1).

ECLA - Economic Commission for Latin America, 1964: <u>Brazil: 15 Years of Economic Policy</u>. Reprinted in Portuguese as **Lessa**, 1982.

Edwards, S. 1988: Financial Deregulation and Segmented Capital Markets: The Case of Korea. <u>World Development</u>, 16(12), pp. 185-94.

Fei, J. C. H. and G. Ranis, 1968: Foreign Assistance and Economic Development: Comment, <u>American Economic Review</u>, 78, September, pp. 897-912.

Felix, D. and J. P. Caskey 1990: The Road to Default: An Assessment of Debt Crisis Management in Latin America. In D. Felix (ed.) <u>Debt and Transfiguration? Prospects for Latin America's Economic Revival</u>. New York and London: M.E. Sharpe.

Fisher, I. 1933: The Debt-Deflation Theory of Great Depression. Econometrica, (1), October, pp. 337-57.

Fishlow, A. 1972: Some Reflections on the Post-1964 Economic Policy. In Authoritarian Brazil, A. Stepan (ed.), New Haven: Yale University Press.
_____ 1986: A Economia Política do Ajustamento Brasileiro aos Choques do Petróleo: uma Nota sobre o Período 1974/84. Pesquisa e Planejamento Econômico, 16(3), IPEA, Rio de Janeiro.

FitzGerald, E.V.K. 1990: Kalecki on Financing Development: an Approach to the Macroeconomics of the Semi-Industrialised Economy. Cambridge Journal of Economics, 14, pp. 183-203.

_____ and R. Vos 1989: Financing Economic Development: an Approach to Economic Development. Aldershot: Gower.

Foley, D. and W. Lazonick 1986: Finance, Growth and Stagnation. mimeo.

Fry, M. 1989: Money, Interest, and Banking in Economic Development. New York: The Johns Hopkins University Press.

FUNDAP - Fundação do Desenvolvimento Administrativo 1988: Déficit e Endividamento do Setor Publico. Relatório de Pesquisa 5, October 1988, São Paulo.

Galbis, V. 1977: Financial Intermediation and Economic Growth in Less Developed Countries: A Theoretical Approach. Journal of Development Studies, 13, January, pp. 58-72.

Galvêas, E. 1985: Sistema Financeiro e Mercado de Capitais. Rio de Janeiro: IBMEC.

Gatti, D.D. and **Gallegatti**, M. 1990: Financial Instability, Income Distribution, and the Stock Market. Journal of Post Keynesian Economics, pp. 356-374.

Gerschenkron, A. 1962: Economic Backwardness in Historical Perspective: a Book of Essays. Cambridge, Mass.: Harvard University Press.

Gersovitz, M. 1989: Saving and Development. In Chenery, H.B. and T.N. Srivasan (eds): Handbook of Development Economics. Amsterdam: North-Hooland, pp. 382-422.

Godley, W.A.H. and **Cripps**, F. 1985: Macroeconomics. London: Fontana Paperbacks.

Goldsmith, R. W. 1969: Financial Structure and Development. New Haven: Yale University Press.

_____ 1986: Desenvolvimento Financeiro um Século de Inflação. São Paulo: Ed. Harper & Row do Brasil.

Goodhart, C.A.E. 1975: Money, Information and Uncertainty. London: Macmillan, 1989 (revised edition).

_____ 1989: Has Moore Become Too Horizontal. Journal of Post Keynesian Economics, Fall, 12, pp. 29-35.

Gurley, J. and **Shaw**, E.S. 1955: Financial Aspects of Economic Development. American Economic Review, 45(4), September, pp. 515-538.

_____ 1960: Money in a Theory of Finance. Washington: The Brookings Institution.

Hahn, F.H. 1981: Money and Inflation. Cambridge, Mass.: MIT Press.

Harrod, R.F. 1939: An Essay on Dynamic Theory, Economic Journal, 49, 14-33. Reprinted in Sen 1970).

Harrod, R.F. 1956: <u>Towards a Dynamic Economics</u>. Macmillan & Co Ltd, New York.

Heise, A. 1992: Commercial Banks in Macroeconomic Theory. <u>Journal of Post Keynesian Economics</u>, Spring, 14(13), pp. 285-295.

Hicks, J. R. 1937a: Mr. Keynes and the Classics : a Suggested Interpretation. In <u>Critical Essays in Monetary Theory</u>, New York, Oxford University Press.
_____ 1937b: Alternative Theories of the Rate of Interest: Rejoinder. <u>Economic Journal</u>, September, pp. 436-42.
_____ 1985: <u>Methods of Dynamic Economics</u>. Oxford: Caledon Press.

Hilferding, R. 1910: <u>Finance Capital, A Study of the Latest Phase of Capitalist Development</u>. London: Routledge & Kegan Paul, 1981.

Hirschman, A.O. 1970: <u>Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States</u>. Mas. and London: Harvard University Press.

IBGE - Instituto Brasileiro de Estatística e Geografia, 1987: <u>Estatísticas Históricas do Brasil</u>, Séries Estatísticas Retrospectivas, vol. 3. Rio de Janeiro: IBGE.

Johnson, H.G. 1967: Money in a Neo-Classical One-Sector Growth Model. In <u>Essays in Monetary Economics</u>, 2nd edition, London: George Allen and Unwin, pp. 141-178.
_____ 1976: Destabilizing Speculation: A General Equilibrium Approach. <u>Journal of Political Economy</u>, pp. 101-108.

Kaldor, R. 1985: <u>Economics without Equilibrium</u>. M.E. Sharpe Inc., New York.

Kalecki, M. 1971: <u>Selected Essays on the Dynamics of the Capitalist Economy: 1933 - 1970</u>. Cambridge: Cambridge University Press.

Kennedy, W. P. 1987: Industrial Structure, Capital Markets and the Origins of British Economic Decline. Cambridge: Cambridge University Press.

Keynes, J.M. Collected Writings (CW). D.E. Moggridge and E. Johnson, eds. Macmillan for the Royal Economic Society.

_____ 1930: The Treatise on Money: The Pure Theory of Money. Reprinted in the Collected Writings, 1, 1971.

_____ 1936: The Theory of Employment, Interest and Money. New York, Harcourt Brace and World, 1964.

_____ 1937a: Alternative Theories of the Rate of Interest, Economic Journal, June. Reprinted in the Collected Writings, vol. XIV, pp. 201-15, 1973.

_____ 1937b: The 'Ex-Ante' Theory of the Rate of Interest, Economic Journal, December. Reprinted in the Collected Writings, vol. XIV, pp. 215-23, 1973.

_____ 1938: Mr Keynes and Finance, Economic Journal, June. Reprinted in the Collected Writings, vol. XIV, pp. 229-34, 1973.

_____ 1939: The Process of Capital Formation, Economic Journal, September. Reprinted in the Collected Writings, vol. XIV, pp. 278-85, 1973.

_____ 1979: The General Theory and After: A Supplement. Collected Writings, vol. XXIX.

Kindleberger, C.P. 1978: Manias, Panics, and Crashes. New York: Basic Books.

_____ 1987: Financial Deregulation and Economic Performance: An Attempt to Relate European Financial History to Current LDC Issues. Journal of Development Economics, 27, pp. 339-353.

King, M. 1985: The Economics of Saving: A Survey of Recent Contributions. In Arrow, K.J. and S. Honkapohja (eds), Frontiers of Economics, Basil Blackwell, pp. 227-334.

Kornai, J. 1971: Anti-Equilibrium. Amsterdam: North Holland.

Kregel, J.A. 1984-5: Constraints on the Expansion of Output and Employment: Real or Monetary?. Journal of Post Keynesian Economics. Winter, 7(2), pp. 139-52.

Kumar, R. C. 1983: Money in Development: A Monetary Growth Model à la McKinnon. Southern Economic Journal, 50, July, pp. 19-23.

Lal, D. 1991. World Saving and Growth in Developing Countries. University College London, Discussion Paper 91-06.

Lavoie, M. 1985: Credit and Money: The Dynamic Circuit, Overdraft Economics, and Post-Keynesian Economics. In M. Jarsulic (ed.), Money and Macro Policy, Boston: Klumer-Nijhoff, pp. 63-84.
_____ 1986-7. Systemic Financial Fragility. Journal of Post Keynesian Economics.

Leff, N. H. 1968: Economic Policy and Development in Brazil 1947-1964. London: John Wiley & Sons.

Leijonhufvud, A. 1968: On Keynesian Economics and the Economics of Keynes. New York, Oxford University Press, 1981.
_____ 1981: Information and Coordination: Essays in Macroeconomic Theory. New York, Oxford University Press, 1988.

Lessa, C. 1982: Quinze Anos de Política Econômica. São Paulo: Brasiliense.

Lewis, M. K. 1992: Modern banking in theory and practice. Revue Économique, 10 (2), pp. 203-225.

Ludwick, A.K. 1978: Brazil: a Handbook of Historical Statistics. Hall and Co., Boston, Mass.

Malan, P. S., R. Bonelli, M. P. Abreu and J. E. C. Pereira, 1980. Política Econômica Externa e Industrialização no Brasil (1939-52). Second Edition, Rio de Janeiro: IPEA/INPES.

Mathieson, D.J. 1980: Financial Reform and Stabilization Policy in Developing Economy. Journal of Development Economics, 7, September, pp. 359-398.

Mayer, C. 1988: New Issues in Corporate Finance. European Economic Review, 32, pp. 1167-1189.

McKinnon, R. I. 1973: Money and Capital in Economic Development. The Brookings Institution.

_____ 1988: Financial Liberalization and Economic Development: A Reassessment of Interest-Rate Policies in Asia and Latin America. International Center for Economic Growth, Occasional Papers 6, San Francisco, CA.

MiniPlan - Ministério do Planejamento e Coordenação Geral, 1965: Mercado Brasileiro de Capitais, Documentos EPEA, no. 2.

Minsky, H. P. 1982: The Financial-Instability Hypothesis: Capitalist Processes and the Behaviour of the Economy. In Kindleberger, C.P. and J.P. Laffargue (eds). Financial Crises. Cambridge: Cambridge University Press.

Minsky, H.P. 1986: Stabilizing an Unstable Economy. New Haven and London, Yale University Press.

_____ and P. Ferri 1983-84. Prices, Employment and Profits. Journal of Post Keynesian Economics, Summer, VI(4), pp. 489-99.

Molho, L. 1986: Interest Rates, Saving, and Investment in Developing Countries: A Re-Examination of the McKinnon-Shaw Hypothesis, IMF Staff Papers, n. 33.

270

Moore, B. J. 1985: Wages, Bank Lending and the Endogeneity of Credit Money, in
M. Jarsulic (ed.), In M. Jarsulic (ed.), Money and Macro Policy, Boston:
Klumer-Nijhoff, pp. 1-28.

_____ 1988: Horizontalists and Verticalists : The Macroeconomics of Credit
Money. Cambridge: Cambridge University Press.

_____ 1989: A Simple Model of Bank Intermediation. Journal of Post
Keynesian Economics, Fall, 12(1), pp. 12-21.

Moura da Silva, A. 1979: Intermediação Financeira no Brasil: Origens, Estrutura
e Problemas. São Paulo: FEA-IPE, University of São Paulo.

Ohlin, B. 1937a: Some Notes on the Stockholm Theory of Saving and Investment.
Economic Journal March and June, pp. 53-69.

_____ 1937b: Alternative Theories of the Rate of Interest: Rejoinder. Economic
Journal, September.

Pagano, M. 1989: Endogenous Market Thinness and Stock Price. Review of
Economic Studies, 56, pp. 269-288.

Patinkin, D. and D. Levhari, 1968: The Role of Money in a Simple Growth Model,
American Economic Review, 58(3), September, pp. 713-53.

Pérez-Campanero, J. and A. M. Lopez 1991: Liberalization and Financial Crisis in
Uruguay 1974-1987), IMF Working Paper.

Pereira, J.E.C. 1974: Financiamento Externo e Crescimento Econômico no Brasil:
1966/73. Relatórios de Pesquisa no. 27. Rio de Janeiro: IPEA/INPES.

Pereira, L.C.B. 1983: Development and Crisis in Brazil, Westview Special Studies
on Latin America and Caribbean. Westview Press: Colorado.

Pettenati, P. 1977: Alternative Theories of a Money-Capital Economy: Keynes, Tobin and the Neoclassics. Oxford Economic Papers, n. 29, pp. 357-69.

Pollard, S. 1964: Fixed Capital in the Industrial Revolution in Britain, The Journal of Economic History, 24(3), September, pp. 299-314.

Portocarrero de Castro, H.O. 1981: As Causas Econômicas da Concentração Bancária Instituto Brasileiro de Mercado de Capitais, Rio de Janeiro.

Resende, A.L. 1982: A Política Brasileira de Estabilisação: 1963/68. Pesquisa e Planejamento Econômico 12 (3), pp. 757-806.

Richardson, D. R. 1986: Asimakopolus on Kalecki and Keynes on Finance, Investment and Saving. Cambridge Journal of Economics, 10, March, pp. 191-8.

Robertson, D. H. 1937a: Some Notes on Keynes's General Theory of Employment. Economic Journal September, 41, pp. 395-411.
_____ 1937b: Theories of the Rate of Interest: Rejoinder. Economic Journal, September, pp. 428-36.

Robinson, J. 1972: Economic Heresies - Some Old Fashioned Questions in Economic Theory. London: Macmillan.
_____ 1979: The Generalisation of the General Theory and Other Essays London: Macmillan.

Rogers, C. 1989: Money, Interest and Capital Cambridge: Cambridge University Press.

Schumpeter, J. 1934: The Theory of Economic Development Harvard University Press, 1951.
_____ 1939. Business Cycles. New York: McGraw.

Sen, A. (ed.) 1970: Introduction to Growth Economics, Middlesex: Penguin Books.

Serra, J. 1982: Ciclos e Mudanças Estruturais na Economia Brasileira no Pós-Guerra. In Belluzzo. L.G. and R. Coutinho (orgs.), Desenvolvimento Capitalista no Brasil: Ensaios sobre a Crise, São Paulo: Brasiliense, pp. 56-121.

Shaw, E. S. 1973: Financial Deepening in Economic Development New York, Oxford University Press.

Simonsen, M.H. 1969: Inflation and the Money and Capital Markets in Brazil. In The Economy of Brazil, H.S. Ellis (ed.). Los Angeles: University of California Press.

_____ 1991: Poupança e Crescimento Econômico. Revista Brasileira de Economia, September.

Sochaczewski, A.C. 1980: Financial and Economic Development in Brazil, 1952-1968 Unpublished Ph.D. Thesis, London School of Economics, July.

Solow, R. 1956: A Contribution to the Theory of Economic Growth. Quarterly Journal of Economics, 70 (6), pp. 65-94.

Stern, N. 1989: The Economics of Development: A Survey. Economic Journal 99, September, pp. 597-685.

Stiglitz J.E. and A. Weiss 1981: Credit Rationing in Markets with Imperfect Competition, American Economic Review 73(5), June, pp. 393-410.

_____ 1988: Banks as social accountants and screening devices for the allocation of credit. National Bureau of Economic Research, Working paper 2710.

Syrup, D. 1972: Estrutura e Política de Juros no Brasil - 1960-70. <u>Revista Brasileira de Economia</u>, 26(1), January-March.

Tavares, M.C. 1972: <u>Da Substituição de Importações ao Capitalismo Financeiro</u>. Rio de Janeiro: Zahar.

_____ 1978: Ciclo e Crise: o Movimento Recente da Industrialização Brasileira. Thesis presented at the Federal University of Rio de Janeiro (FEA-UFRJ).

Taylor, L. and S. A. O'Connel, 1985: A Minsky Crisis, <u>Quartely Journal of Economics</u>, pp. 871-885.

Terzi, A. 1986: The Independence of Finance from Saving: a Flow of Funds Interpretation. <u>Journal of Post Keynesian Economics</u>, 9(2), pp. 188-197.

Tobin, J. 1958: Liquidity Preference as Behaviour Towards Risk. <u>Review of Economic Studies</u>, 25, February, pp. 173-91.

_____ 1965: Money and Economic Growth. <u>Econometrica</u> 33(4), October, pp. 671-84.

Todaro, M. P. 1981: <u>Economic Development in the Third World</u>. New York and London: Longman (second edition).

Torr, C.S.W. 1983: <u>Equilibrium, Expectations and Information</u> Ph.D. Thesis, Rhodes University.

Trebat, T.J. 1983: <u>Brazil's State-Owned Enterprises</u> Cambridge: Cambridge University Press.

Wade, R. 1989: The Role of Government in Overcoming Market failure: Taiwan, Republic of Korea and Japan. In H. Hughes (ed.), <u>Achieving Industrialization in East Asia</u> Cambridge: Cambridge University Press, pp. 129-63.

Weintraub, E. R. 1979: <u>Microfoundations</u>. Cambridge: Cambridge University Press.

_____ 1982: <u>General Equilibrium Theory</u>. London: Macmillan.

Wells, J. R. 1979: Brazil and the Post-1973 Crisis and the International Economy. In Rosemary Thorp & Laurence Whitehead (eds), <u>Inflation and Stabilization in Latin America</u>. London: MacMillan.

Werneck, A. O. 1969: As Atividades Empresariais do Governo Federal no Brasil. <u>Revista de Economia Brasileira</u> 23(3), July, pp. 89-100.

Werneck, R. F. 1987: Uma Análise do Financiamento e do Investmento das Empresas Estatais Federais no Brasil: 1980-3. <u>Revista Brasileira de Economia</u>, 39(1), pp. 3-26.

Winnet, A. 1992: Some Semantics of Endogeneity. In V. Chick and P. Arestis (eds.), <u>Recent Development in Post-Keynesian Economics</u>. London: Edward Elgar.

The World Bank 1984a: <u>Brazil: Economic Memorandum</u> A World Bank Country Study.

_____ 1984b: <u>The World Development Report 1984</u>. New York: Oxford University Press.

_____ 1985: <u>Brasil, Análise dos Sistemas Financeiros</u>. Rio de Janeiro: IBMEC.

The World Bank 1989: <u>The World Development Report 1989: Financial Systems and Development</u>. New York: Oxford University Press.

_____ 1990: <u>The Restructuring of Financial Systems in Latin America</u>. Economic Development Institute, 25, Washington, D.C.

_____ 1991: <u>The World Development Report 1989: The Challenge of Development</u>. New York: Oxford University Press.

Wray, L. R. 1989: A Keynesian Theory of Banking: a Comment on Dymski. <u>Journal of Post Keynesian Economics</u>, 12(1), pp. 152-163.

_____ . 1992: Commercial Banks, the Central Bank and Endogenous Money. <u>Journal of Post Keynesian Economics</u>, Spring 1992, 14(3), pp. 297-320.\

Zini Jr., A. 1982: Uma Avaliação do Setor Financeiro no Brasil da Reforma de 1965-66 a Crise dos Anos 80. Unpublished MA. Dissertation, DEPE, Universidade de Campinas.

_____ 1984: Evolução da Estrutura Financeira das Empresas no Brasil 1969-1977. <u>Estudos Econômicos</u>, 14(1), January-April.

Zonisein, J. 1984: Atitudes Nacionais e Financiamentos da Indústria: A Experiência Brasileira, Discussion Paper 63, IEI-UFRJ, December.

Zysman, J. 1983: <u>Governments, Markets, and Growth: Financial Systems and the Politics of Industrial Growth</u> London: Martin Robertson.