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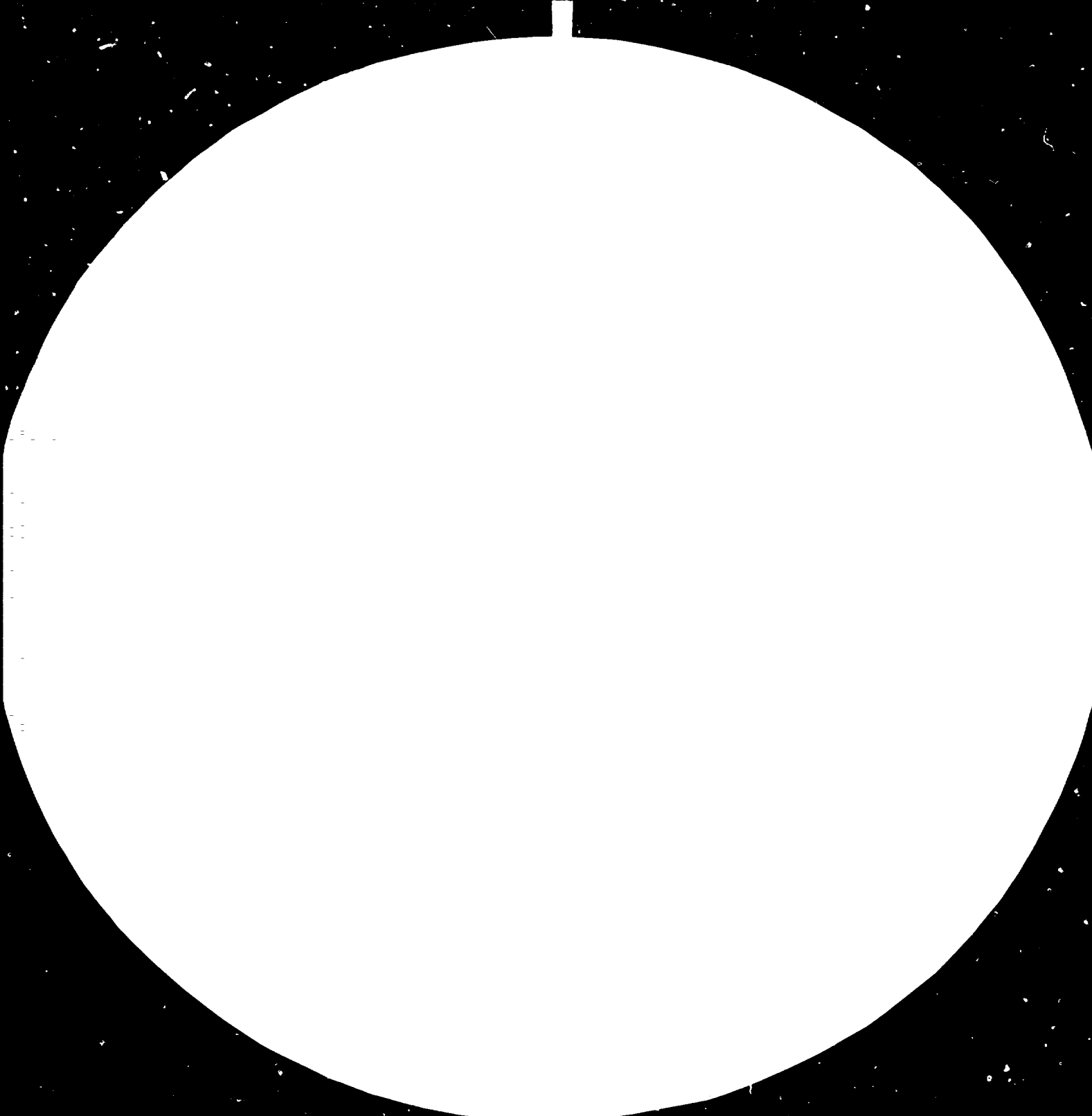
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FINANCING OF INDUSTRIAL ENTERPRISES AND
FINANCIAL REPRESSION IN LATIN AMERICA*

Series on the domestic financing of
manufacturing enterprises in developing countries .

Prepared by

Mario S. Brodersohn
UNIDO Consultant

in co-operation with

Regional and Country Studies Branch
Division for Industrial Studies

002260

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FOREWORD

Prepared by UNIDO Secretariat's Regional and Country Studies Branch,
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This study consists of a series of surveys of the effectiveness of financial intermediary institutions such as banks in collecting investible funds and channelling them to manufacturing enterprises in various parts of the developing world. The purpose of the following section is to introduce the subject of the relation between financial intermediation and industrial development. Subsequent sections make a brief presentation of the surveys.

Financial systems and industrial development

Development economists usually discuss the subject of finance in terms of saving of adequate amounts of real resources to achieve given targets for capital formation. In development planning, for instance, it is common to estimate the resource requirements of a desired growth rate by means of an incremental capital-output ratio. This ratio determines the investment needed to sustain the desired growth of the capital stock. To match this investment a corresponding amount of real resources must be released from consumption. Thus, financing is basically an act of saving. At the practical level this approach usually stresses the need for policies to raise the quantity of resources saved for growth.

While this conception is useful for many purposes it neglects, however, the fact that real resources have to be transformed into investment and that this transformation can be done more or less efficiently. In the present study the focus is set precisely on this process of transformation. Here financing is understood to

mean the provision of purchasing power that investors can spend in advance of production. What matters here is not only the act of saving but also the transformation of these savings in a form suitable to investors.

It is only in the seventies^{1/} that the intermediation procedure whereby real resources are transformed into lending was fully recognized by development economists as an important factor in capital formation. Since then it progressively appeared that the finance of development could be enhanced not only by increasing the quantity of real resources saved for investment but also by improving the effectiveness of the financial system whereby part of these resources are channelled to investment.

One could consider that in performing its intermediation function the financial system influences the amount of finance put at the disposal of industry in three respects.

To start with, there is the transformation of saving - mostly done by households but also by the government, the corporate and the foreign sectors - into financial assets. These financial assets constitute a pool of transferable funds from which the financial institutions can draw to onward lend. Such transferable funds are crucial for the financing of newly expanding sectors. The first contribution of the financial system to industrial finance thus is to offer financial assets attractive enough to compete with other uses for saving such as hoarding or speculative purchases.

^{1/} When the publication of two books drew the attention of development economists to questions which previously had been discussed almost exclusively among finance specialists. See McKinnon, R.I., Money and Capital in Economic Development, The Brookings Institution, Washington D.C., 1973, and Shaw, E.S., Financial Deepening in Economic Development, Oxford University Press, New York, 1973.

The second aspect is the transformation of financial savings into lending. In the industrial field investment-funding basically requires long-term finance. Thus the financial system contributes to industrial growth by transforming short-term financial assets into the long-term form of the loans demanded by industry. This "maturity transformation" seeks to reconcile the short-term preference of the lenders to the long-term preference of the borrowers under the umbrella of the law of large numbers.

The third aspect is the allocation of investible funds. Financial savings can be made available to various alternative uses. Industrial investment is only one of these uses and it has to compete with housing credit, commercial credit, government borrowing, speculative purchases, etc. In practice there are wide inter-country differences in the proportion of total financial savings going to long-term industrial finance.^{1/} This fact suggests that there is considerable room for increasing the finance made available to industry by imposing appropriate orientations to the financial system.

While acting on the financial system, which is only a set of intermediation channels, is not the same thing as increasing the amount of resources entering into the pipeline, it can attract additional savings, reduce leakages during the intermediation process and deploy the transferred funds more effectively. Improving the financial system is therefore tantamount to raising the quantity and quality of investment and hence the rate of industrial growth.

^{1/} See Carrington, J.C., and Edwards, G.T., Reversing Economic Decline, The MacMillan Press, London, 1981. The book documents the differences among the Federal Republic of Germany, France, Japan, the United Kingdom and the United States of America.

Furthermore, it may be noted that efficient financial systems are needed not only to fully mobilize domestic resources but also to attract as much foreign resources as possible by identifying the best investment opportunities the country can offer and by creating a reassuring atmosphere of financial soundness.

The Surveys

The series comprises four surveys. Two of them offer bird's-eye-views of Africa and Latin America. The two others review selected countries: India - to which a complete survey has been devoted by virtue of her size and the sophistication of her financial system - and Bangladesh, Indonesia, Malaysia, Sri Lanka and Thailand.

The surveys examine the source and type of financing and discuss the influence of the existing patterns, as well as gaps and deficiencies in the availability and channelling of finance to manufacturing enterprises.

Finance is in part provided directly to investors by initial savers. In this study, this source of finance is only dealt with in passing when the surveys discuss self-finance or when the subjects of company deposits or security markets are touched.

The central theme of the surveys is financial intermediation between lender and borrower.

The surveys examine the three main aspects of intermediation mentioned in the preceding section - collection, transformation, allocation - and address the following questions: Does the financial system make the contribution it is capable of making? If so, what should be done to keep the system in good condition as developing countries undergo the profound structural changes that

lie ahead of them? If not, how can it be brought into working order? It must be admitted that these questions have not been fully answered. The resources assigned to the task have been designed to provide background surveys, not specific solutions. It is felt, however, that the diversity of experiences analysed allows for an evaluation of problems, issues and policies that will be useful not only to the countries surveyed but also to other developing countries as well as to development finance corporations and aid agencies.

Every survey contains, of course, its own insight shaped by the particular circumstances of the region or country reviewed. The survey of India, for instance, offers a detailed financial analysis based on more than 2,000 balance sheets of companies in the manufacturing sector. The analysis is extended to several groups of companies and covers the financing of fixed assets and the financing of working capital in addition to the overall financing pattern. The African survey, acknowledging that Africa is heavily dependent on foreign financing, pays a good deal of attention to the relation between domestic and international financing. The Latin American survey presents the sources and uses of funds by industrial enterprises and analyses the main financial ratios of selected groups of enterprises in a number of countries of the region. The survey of Bangladesh, Indonesia, Malaysia, Sri-Lanka and Thailand stresses the role of policies, such as tax incentives and accelerated depreciation, designed to generate resources within the industrial sector itself in the context of insufficient supply on the part of the financial system.

Underlying the particular insights is a common canvas to which the substance, if not the format, of all the four surveys tends to

conform. A synoptic scrutiny indicates that each survey reviews the main parts of the structure of the financial system - the financial institution, the financial instruments and the influence of background factors on institutions and instruments - in relation to the major functions of the financial system - collection, transformation, allocation.

The structure of the financial system

Schematizing a bit, it may be stated that the analytical focus shifts from one aspect to another according to the degree of financial sophistication of the region surveyed.

Financial institutions

The main financial institutions exercising an intermediary function are the banks and the development finance corporations (DFC). The paper dealing with Africa, which is on the lower part of the sophistication scale, gives emphasis to what constitutes the infrastructure of any financial system: the Central Bank and the commercial banking system. The paper on Bangladesh, Indonesia, Malaysia, Sri Lanka and Thailand gives relatively more attention to the role of DFCs and specialized banks. A cross-section of these two surveys reveals that the financial structure follows a typical pattern of change in the course of economic development.

In very poor countries the most important aspect of financial intermediation is the policy of the Central Bank in providing credit to productive enterprises.

Time and savings deposits require not only full convertibility into the means of payment but also a real return which is attractive enough to compensate for the time restriction on liquidity.

Provided these conditions are fulfilled, a relative diminution of coins and currency occurs and the commercial banking sector, broadly defined to include interest-bearing deposits of all kinds and possibly intermediate-term bonds sold to final savers, tends to gain importance in the organized capital markets. If banks are to take their due importance in the financing of industry, it is recommended that facilities should be made available throughout each country to acquire claims on banks.

As development proceeds, the rise of demand and time deposits in commercial banks is supplemented by the emergence of pension funds, insurance companies, etc.

The banking system usually is the main source of financing in the industry of developing countries, but its credit is almost entirely short-term because the banks lack the incentives, the means and the skills to deal with long-term credits or because they are prevented from doing so by law or custom.

The purpose of the DFCs is to fill the gap in medium-term and long-term credit and investment.

Financial instruments

The papers on India and Latin America, regions where a diversified institutional basis already exists, set the focus on the instrumental form of the funds provided to industry.

The Latin American survey describes the structure of financing existing in several countries of the region in terms of the importance of internally generated funds - reinvested profits plus capital utilization allowances - and funds provided by outside savers - debt and equity. This pattern is then compared to existing patterns in more developed countries and is found to be similar as

far as the proportion of financing by banks is concerned. An attempt is also made to weigh short-term vis-a-vis long-term credit financing. Here Latin America tends to have a disproportionate share of short-term financing, probably as a result of high and fluctuating inflation rates.

The Indian survey, taking advantage of a wealthier stock of data, describes not only the broad financing patterns of manufacturing enterprises but analyzes more in detail various financial instruments used to finance industry. This analysis leads the author to suggest possible improvements.

Sophisticated variants of term loans convertible into equity are proposed for consideration. The idea is to find ways of circumscribing the right of conversion which, in the eyes of borrowers, appears as a major drawback.

Follow-up procedures are judged to be burdensome for the successful enterprises and ineffectual in the case of non-compliance of the loan agreement. New procedures are suggested to improve this situation.

Underwriting operations as applied in India are found not to be conducive to an efficient use of resources by the borrowers. It is, notably, suggested to replace underwriting by a loan bearing a nominal interest.

A combination of participative debentures and convertible debentures is expected to give well managed, profit-earning companies considerable flexibility in re-moulding their capital structure to suit their projected investment programmes.

Company deposits are funds obtained from directors or shareholders or employees of the company and also from other

companies and individuals in the form of interest bearing, unsecured, short and medium term deposits. To protect depositors legal curbs are imposed on such deposits. It is found that risks are lower than average with manufacturing companies and it is consequently suggested to make a distinction between manufacturing enterprises and the other companies subject to these curbs.

Background factors

A common feature of the four surveys is the importance given to background factors in explaining the performance of financial systems. Background factors include inter-alia inflation, depreciation rules, tax incentives, accounting systems, financial policies, etc. All the mentioned factors are reviewed by the surveys but one of them is given particular attention. It is the policy (henceforth called "financial repression") identified as a policy of low interest rates leading to allocational inefficiency, decline in domestic saving, market segmentation and disintermediation.

The Latin American paper concentrates on the financially repressive context that emerged in the aftermath of 1973 when current inflationary pressures tended to increase considerably. Inflation was fought by imposing maximum interest rates and controlling the purposes of financial loans. But in real terms the interest rates became negative and this, according to the author of the survey, acted as a disincentive on financial saving and an excess of demand for loans was created. Thus, various systems and methods were successively implemented that aimed at rationing credit. In this context of rationing, the projects for which credit was obtained were not necessarily those bringing high social benefit

but those which by tradition, age, size, social and political "connections", etc. came within the "guidelines" for credit rationing. To make progress, projects outside these guidelines naturally had to be based on self-financing or on access to non-institutionalized financial markets. The resultant range of financial costs according to whether or not subsidized credit had been obtained necessarily led to a low level of investment, a poor apportionment of resources and a lower rate of economic growth.

The functions of the financial system

Collection

The studies reveal that in virtually all the countries surveyed there is room to mobilize more financial savings than what is actually done. Admittedly, in poor countries little can be done in the short term to enhance the total saving effort. However, a larger proportion of saving could be entrusted to industrial investors provided primary saving would accrue to a fund of uncommitted resources available for long-term investment. But this does not happen because savings tend to be realized in a form which is not freely transferable to long-term investment uses. The surveys shed light on this unused potential for industrial finance by pointing to two aspects of saving encountered in almost all the countries surveyed.

First the surveys report that as compared to developed economies only a modest proportion of total saving is held in financial assets: for instance 39 per cent in Bangladesh, 45 per cent in Malaysia, 33 per cent in Thailand.

Second, the financial assets held in the countries surveyed are generally of a type which is not suitable for subsequent long-term lending. It appears that these assets tend to be in the form of currency or sight deposits, or in deposits with the post office or entrusted to insurance companies. But money and quasi-money are not suitable for long-term credit, postal savings are offset by post-office holding of government and foreign securities, while insurance companies tend to acquire real estate or existing financial assets rather than to support new productive activities.

Time deposits, which in industrialized countries are the main contribution of households to the pool of investible resources, are negligible in most developing countries. In any case their maturity is not much longer than that of sight deposits. In the Southern Cone of Latin America, for instance, time deposits are, in over 80 per cent of the cases, for periods of less than 30 days.

Noting that a potential exists, the surveys suggest a number of measures that could be taken to attract more funds into financial forms suitable for lending to industry. Some of the measures are indirect ones. These include all the actions tending to increase the monetization of the economy. It is a well established law that as the ratio of money to income rises the ratio of all financial savings to income tends to rise more rapidly. In African countries the community's assets in the form of money and quasi-money are a remarkably low proportion of GNP as compared to industrialized countries (typical ratios would be 0.25 for African countries against 0.60 for industrialized countries). Thus, accelerating monetization in Africa would have the side-effect of increasing the source of funds suitable for financing industry. Another set of indirect measures relate to maintaining monetary stability. Money

denominated assets are eroded when the general level of prices is rising. Once serious inflation emerges savings tend to divert from financial form into land, building and other durable assets that are not readily convertible to money.

More direct measures to encourage financial savings would include the development of institutions collecting fixed-term deposits. Provided deposit interest rates would rise with the maturity of deposits these institutions could attract savers and have a positive effect on the supply of long-term funds. This effect should not, however, be over-emphasized because in the countries surveyed most asset holders, used to the recurrence of inflationary bursts, seem to have a desire for liquidity which is insensitive to interest rates. In Latin America it has not been possible to alter this preference for liquidity even by indexing methods with real rates of over 12 per cent per year.

Funding the DFCs is another way to increase the supply of long-term funds. In order to promote investment, official regulations usually confine the DFC's to the lower end of the spectrum of lending rates prevailing in the country. The DFCs are consequently unable to raise significant resources on commercial terms. Hence the resources are provided by government transfer or through obligations imposed on the banks to keep part of their deposits and loan portfolios as non-interest bearing reserves with the Central Bank. This flow of resources is then channelled by the Central Bank to the various DFCs.

Additional resources at concessional terms are often made available from foreign sources (the World Bank, the regional development banks, special lending institutions of developed

countries). Sometimes long-term borrowing from foreign private sources is also possible.

A common technique for giving the specialized credit agencies some independence in resource availability is to assign them rediscount facilities with the Central Bank or with ad hoc trust funds. The Spanish system of requiring banks to include bonds of other development institutions in their required reserves is mentioned as a model that might be more widely adopted.

Transformation

In most of the countries surveyed the shortage of long-term capital is greater than that of short-term capital. There is thus a case for encouraging maturity transformation.

The survey of Africa notes that, since the Central Bank's rediscounting policies have to be taken into account by the commercial banks seeking funds for onward lending to their clients, Central Banks can influence maturity transformation in countries where they are net lenders to commercial banks. As this is the case in Africa, long-term finance can be encouraged in this region by specific Central Bank rediscounting policies.

Noting that banking legislation is frequently biased against long-term lending the African survey suggests that a more passive but perhaps more effective means of stimulating maturity transformation would simply consist of relaxing restrictive requirements for refinancing by Central Banks and widening banks regulatory requirements.

Commercial banking legislation overemphasizing liquidity requirements have been found to inhibit long-term assets. A re-examination of this legislation and the introduction of

German-Japanese concepts, more oriented towards venture capital, are recommended.

Similarly, insurance institutions could commit a larger share of their resources to long-term investment if they were released from "liquidity requirements" that make them captive markets for government deficit financing.

Even if legislation is not a hinderance financial institutions will tend to restrict long-term loans when funded on short-term deposits because there are interest rate and liquidity risks implied in the imbalance between the spans of deposits and loans.

The method which is being attempted in Argentina to encourage the development of a long-term market in spite of these risks is outlined in the Latin American paper. To protect financial institutions against the interest risk long-term loans are indexed to the cost of short-term money with the help of a new index-linking method which is supposed to be more stable than the method based on the inflation rate. This new system is based on the determination of the effective monthly rate paid by the financial institutions on 30 day deposits, weighed according to each institution's share of the total deposits in the financial system.

The second problem which arises when a bank makes long-term loans with short-term resources is the risk of a contraction in deposits due to a fall in the demand for money as a result of a contraction of the monetary base. As an example of a possible solution it is reported that the Central Bank of the Republic of Argentina has recently established a four year rediscounting system intended to lower the liquidity risk.

Allocation

The pattern of lending to various sectors resulting from the role assumed by financial institutions can affect the financing of industry to a considerable extent.

In support of this statement it has recently been held that the role of financial institutions is decisive in explaining why Japan directs about 50 to 70 per cent of her financial saving to long-term industrial credit while in the case of the United Kingdom the same ratio is only about 20 per cent.^{1/} The difference, it is said, is basically due to the fact that in the United Kingdom financial institutions are much more oriented to consumer credits and real estate mortgages. This contrast suggests the theoretical possibility for the United Kingdom to double or treble the flow of long-term industrial credit not by increasing her saving effort but by re-designing the modus operandi of her financial institutions.

The surveys convey a similar message: there is room for increasing industrial finance in developing countries by setting new roles for the financial institutions.

It appears, however, that a significantly fruitful reform would demand a considerable array of measures, some of them directed at forces outside the financial system itself.

To start with there is the challenge of creating a stable money-and-price environment. This would be the prerequisite for attracting savings in time deposits of over, say, one year. Furthermore, the pattern of interest rates offered should be shaped so that time deposits would be inflation-proof and more rewarding in real terms than short-time deposits. Laws and customs biased against long-term loans should be removed. Finally the financial

^{1/} See Carrington, J.C., and Edwards, G.T., op. cit., P.163.

institutions, particularly the banks, should be encouraged to provide industry with term finance.

It is clear that a programme so decidedly oriented towards industrialization supposes that demand for industrial funds will increase correspondingly with supply. This cannot be taken for granted. Underdevelopment means that a number of adverse factors are affecting the level of real investment that an economy could absorb, particularly in the industrial field. Some of these factors can be neutralized by cheaper and less scarce finance, but not all of them. Finance is needed to put together the men, machines and other inputs needed to implement a project. But this presupposes that an attractive project exists and that access to markets and real factors of production is not constrained by non-financial rigidities. It would be only in a very outstretched sense that qualified manpower, market entry, efficient administration, to mention only a few examples, could be considered as constrained by financial scarcity.

The question of the demand for industrial funds would not matter so much if there was not a trade-off between welfare (for instance more housing for the poor) and growth as well as between sectors of activity (for instance agriculture or energy versus industry). In non-oil developing countries redeploing funds to industry is likely to crowd-out other uses. If some harmony between alternative uses is not respected there is a danger of bringing about social unrest or economic imbalances damageable to the whole process of capital accumulation.

FINANCING OF INDUSTRIAL ENTERPRISES AND FINANCIAL
REPRESSION IN LATIN AMERICA

Introduction

One of the most important objectives of the developing countries is economic growth. The attainment of this objective requires a set of financial policies so devised that they will not only lead to a maximum accumulation of internal savings but also encourage the allocation of these savings in the form of investments in areas of high social productivity. In this way, conditions can be created favourable to the achievement of the ultimate goal - maximizing the rate of economic growth. Using these premises, the author has endeavoured, in the first part of this paper, to present the most significant indicators regarding savings, investment, growth, industrial sector participation, etc. for the last two decades in Latin America. The depth of this analysis is necessarily limited by the availability of statistical data, this limitation being even more severely felt when an attempt is made to identify the principal sources of financing for industrial enterprises. Here, the author could do no more than collect the fragmentary information available for a few years and a small number of Latin American countries. What this means is that any attempt to generalize on how industry is financed in Latin America is not only likely to be based on many purely arbitrary judgements but also quite possibly be negatory.

Although inflation as such is nothing new in Latin America, the high annual rates experienced today in the economies of these nations are unprecedented. Accordingly, no analysis of industrial financing policies can overlook the serious fact of the rapid acceleration of inflation throughout the continent during the 1970s and its consequences for the development of the financial market. In the non-oil-producing countries of Latin America the average annual rate of inflation (measured in terms of cost of living) during the period 1967-1972 was 13.3 per cent, a figure which advanced to levels of 51.5 per cent in 1976 and 48.7 per cent in 1979. As indicated in table 1, during the period 1966-1970, 15 of the 24 Latin American countries experienced annual inflation

Table 1

LATIN AMERICA: ANNUAL VARIATIONS IN THE CONSUMER PRICE INDEX
(Percentages)

| | 1966-70 | 1979 |
|--|---------------------|------|
| Countries with price stability (annual inflation rates of below 5 per cent) | El Salvador | 1.1 |
| | Paraguay | 1.3 |
| | Dominican Rep. | 1.3 |
| | Guatemala | 1.5 |
| | Panama | 1.6 |
| | Venezuela | 1.6 |
| | Honduras | 1.7 |
| | Nicaragua | 1.7 |
| | Haiti | 1.9 |
| | Costa Rica | 2.6 |
| | Guyana | 2.6 |
| | Mexico | 3.7 |
| | Trinidad and Tobago | 3.9 |
| | Barbados | 4.2 |
| Ecuador | 4.8 | |
| Countries with moderate inflation (annual price increases of between 5 and 15 per cent) | Jamaica | 5.4 |
| | Bolivia | 6.0 |
| | Bahamas | 6.2 |
| | Colombia | 9.2 |
| | Peru | 9.9 |
| | Honduras | 6.8 |
| | Panama | 7.9 |
| | Bahamas | 9.1 |
| | Dominican Rep. | 9.1 |
| | Costa Rica | 9.2 |
| | Ecuador | 10.2 |
| Guatemala | 11.5 | |
| Venezuela | 12.3 | |
| Haiti | 13.0 | |
| Barbados | 13.2 | |
| Trinidad and Tobago | 14.7 | |
| Countries with high inflation (annual price increases of above 15 per cent) | Argentina | 19.7 |
| | Chile | 26.1 |
| | Brazil | 29.3 |
| | Uruguay | 65.2 |
| | El Salvador | 15.9 |
| | Guyana | 17.8 |
| | Mexico | 18.2 |
| | Bolivia | 19.7 |
| | Colombia | 24.4 |
| | Paraguay | 28.1 |
| | Jamaica | 29.0 |
| Chile | 33.4 | |
| Nicaragua | 47.9 | |
| Brazil | 52.7 | |
| Uruguay | 66.8 | |
| Peru | 66.8 | |
| Argentina | 159.5 | |

rates below 5 per cent and only four were above the 15-per-cent mark. By 1979 the situation had completely reversed; there were now no countries with rates below 5 per cent per annum, whereas 13 had already moved beyond an annual rate of 15 per cent.

As a result of these high rates of inflation and the efforts to regulate monetary operations through a policy of high interest rates (below the inflation rate), the development of the financial market was affected, as incentives for saving disappeared and a boost was given to speculative investments in inflationary areas. As the end result of all these factors, the level and composition of investment was adversely affected and the country's capacity for growth was weakened accordingly.

In the light of these considerations, the purpose of the analysis presented in the second part of this paper is to explain what is understood by, and what are the effects of, an economy operating under "financial repression" and to ascertain the extent of that repression in Latin America during the 1970s. This is followed by an analysis of recent attempts at interest rate liberalization in the three countries of the Southern Cone (Argentina, Chile, and Uruguay) and the effects of these efforts on the monetization (financial deepening) of their economies. Finally, Argentina's efforts to establish a long-term financial market are analysed.

CHAPTER I

INDUSTRIAL FINANCING IN LATIN AMERICA

The aim of this chapter is to present the principal statistical indicators regarding the role of savings and investment throughout the economy, as well as concerning the sources and uses of funds by industrial enterprises, in those Latin American countries for which it was possible to obtain relevant statistics.

Savings, investment and economic growth in Latin America.

Since the Second World War, academic discussion and political decision-making have largely concentrated on industrialization strategies based on import substitution. Despite this almost exclusive attention to industrialization, there have been only a few scattered efforts to study the specific aspects of industrial financing in Latin America. ^{1/} To a substantial degree, this lack of research interest may be traced to the paucity of statistics on the subject. Because of the absence of the most basic data on financing sources and even of statistics on such subjects as interest rates and loan repayment periods and purposes, we have only broad generalizations to go on in the entire field of industrial financing.

As a consequence, in the first part of this paper also, there is no choice but to resort to this general approach to the question of Latin American industrial financing. I shall begin by presenting the most important statistics for the 1960s and 1970s on economic growth and the ratio between gross savings and investment, on the one hand, and the gross domestic product (GDP), on the other, in the Latin American countries.

Table 2 shows the growth rates of the per capita gross domestic product. The table indicates an acceleration of such growth between 1960-1964 and 1970-1974, followed by a reversal of this trend in 1975-1978. I have made no

^{1/} The most detailed works on this subject have been prepared by the Inter-American Development Bank (2), the United Nations Economic Commission for Latin America (23), again by IDB for the capital markets project summarized by Antonin Basch and Kybal Milic (5), and by the Organization of American States (OAS) in its capital market studies on the early 1970s. The most recent study, and one which in large measure represents a revision of this series of isolated studies, is that by Hugh H. Schwartz (30).

attempt to group the countries according to one or another set of criteria for the purpose of arriving at some sort of theoretical generalization; this seems to me a useless effort in view of the heterogeneity of Latin American countries. Rather, I have thought it far more useful to indicate the situation for each Latin American country separately. This same principle is also followed in the other statistical tables.

Table 3 shows the relative importance of gross domestic investment in GDP. A number of interesting questions arise from a comparison of tables 2 and 3: for example, how is it that, despite a lower rate of investment, Mexico achieved higher growth rates than Argentina during the period 1960-1964? Comparison of Peru and Venezuela reveals a similar situation: in the period 1965-1969 both countries enjoyed identical rates of growth, whereas in the period 1970-1974 Peru pulled ahead of Venezuela (3.9 per cent as against 2.1 per cent), although Venezuela regularly had a higher rate of investment than Peru - Venezuela with 25.7 per cent and 27.4 per cent in 1965-1969 and 1970-1974, respectively, as opposed to Peru with 17.1 per cent and 15.9 per cent for the same periods. These facts once again draw attention to the difficulties inherent in an analysis of such highly aggregated data and to the impossibility of drawing any kind of general conclusion from them.

Table 4 indicates the distribution of the gross fixed investment in construction and in machinery and equipment.

Table 5 gives data on the role of gross savings in GDP for the same periods as in the preceding tables. This table is supplemented by table 6, which analyses financing and investment sources in terms of domestic (public and private) and external savings. Unfortunately, no conclusion can be drawn from these two tables as to whether a positive relationship exists between GDP levels and/or growth and the rate of gross saving.

These five tables comprise the survey of the most important aggregate figures for Latin America, the sole purpose of their presentation being to provide a general picture of the countries in question.

Tables 7, 8 and 9 refer to the Latin American industrial sector. In table 7 the relative importance of this sector to the economy of each of the countries has been presented, over a considerable period. It will be noted that while in the 1940s industry accounted for little more than 18 per cent of GDP in Latin America as a whole, the figure had risen to 25 per cent in the

Table 2

GROWTH OF PER CAPITA GROSS DOMESTIC PRODUCT
(Average annual rates)

| Country | 1960-64 | 1965-69 | 1970-74 | 1975-78 |
|--------------------|---------|---------|---------|---------|
| Argentina | 2.9 | 2.8 | 3.0 | (-2.1) |
| Bolivia | 2.2 | 3.6 | 2.7 | 3.0 |
| Brazil | 1.6 | 4.6 | 7.4 | 3.2 |
| Colombia | 1.3 | 2.8 | 3.5 | 2.5 |
| Costa Rica | 1.4 | 3.7 | 3.5 | 2.3 |
| Chile | 2.6 | 1.9 | 1.0 | (-0.3) |
| Ecuador | 2.3 | 2.1 | 3.0 | 3.7 |
| El Salvador | 3.6 | 0.8 | 1.8 | 1.8 |
| Guatemala | 2.1 | 2.7 | 3.4 | 2.5 |
| Haiti | (-2.7) | (-0.3) | 2.2 | 0.6 |
| Honduras | 2.1 | 1.3 | (-0.4) | 1.9 |
| Mexico | 3.7 | 3.5 | 2.8 | 0.4 |
| Nicaragua | 6.9 | 0.8 | 2.2 | (-1.0) |
| Panama | 5.1 | 4.3 | 3.0 | (-0.8) |
| Paraguay | 2.3 | 1.5 | 3.2 | 5.3 |
| Peru | 3.5 | 1.4 | 3.9 | (-1.7) |
| Dominican Republic | (-0.6) | 4.2 | 6.6 | 0.9 |
| Uruguay | (-0.4) | 1.3 | 0.3 | 2.8 |
| Venezuela | 3.6 | 1.3 | 2.1 | 3.5 |
| Total | 2.5 | 3.1 | 3.9 | 1.2 |

Source: United Nations (25).

Table 3

GROSS DOMESTIC INVESTMENT
(Percentage of GDP)

| Country | 1960-64 | 1965-69 | 1970-74 | 1975-77 |
|--------------------|---------|---------|---------|---------|
| Argentina | 20.0 | 18.8 | 20.8 | 21.9 |
| Bolivia | 14.8 | 16.2 | 18.0 | 22.2 |
| Brazil | 22.0 | 20.0 | 26.7 | 28.2 |
| Colombia | 19.2 | 19.6 | 20.9 | 19.8 |
| Costa Rica | 18.1 | 19.2 | 23.5 | 23.4 |
| Chile | 17.1 | 16.1 | 13.8 | 6.9 |
| Ecuador | 14.2 | 18.0 | 21.9 | 27.6 |
| El Salvador | 14.1 | 14.3 | 16.3 | 21.5 |
| Guatemala | 10.3 | 12.7 | 14.3 | 19.6 |
| Haiti | 7.8 | 6.2 | 9.2 | 12.6 |
| Honduras | 14.3 | 17.6 | 19.8 | 19.9 |
| Mexico | 19.2 | 21.2 | 21.5 | 24.2 |
| Nicaragua | 16.8 | 20.3 | 20.8 | 21.5 |
| Panama | 18.3 | 21.3 | 28.5 | 29.1 |
| Paraguay | 12.2 | 15.9 | 16.9 | 24.5 |
| Peru | 21.2 | 17.1 | 15.9 | 20.4 |
| Dominican Republic | 12.6 | 13.9 | 20.4 | 23.0 |
| Uruguay | 15.0 | 11.5 | 11.9 | 13.0 |
| Venezuela | 21.9 | 25.7 | 27.4 | 34.3 |

Source: Inter-American Development Bank (3).

Table 4

GROSS FIXED INVESTMENT: COMPOSITION
(Percentages at constant 1970 prices)

| Country | Construction investment | | | | Investment in machinery | | | |
|----------------|-------------------------|------|------|---------|-------------------------|------|------|---------|
| | 1960 | 1965 | 1970 | 1975-77 | 1960 | 1965 | 1970 | 1975-77 |
| Argentina | 54.9 | 52.9 | 56.6 | 50.9 | 45.1 | 47.1 | 43.4 | 49.1 |
| Bolivia | 49.9 | 36.4 | 47.1 | 41.3 | 50.1 | 63.6 | 52.9 | 58.7 |
| Brazil | 52.8 | 54.8 | 51.5 | 48.9 | 47.2 | 45.2 | 48.5 | 51.1 |
| Colombia | 46.2 | 48.8 | 52.3 | 49.5 | 53.8 | 51.2 | 47.7 | 50.5 |
| Costa Rica | 61.3 | 54.2 | 50.1 | 52.7 | 38.7 | 45.8 | 49.9 | 47.3 |
| Chile | 62.3 | 63.4 | 56.3 | 47.4 | 37.7 | 36.6 | 43.7 | 52.6 |
| Ecuador | 57.2 | 60.0 | 56.9 | 58.4 | 42.8 | 40.0 | 43.1 | 41.3 |
| El Salvador | 42.8 | 38.1 | 42.9 | 41.6 | 57.2 | 61.9 | 57.1 | 58.4 |
| Guatemala | 40.1 | 37.0 | 29.7 | 35.5 | 59.9 | 63.0 | 70.3 | 64.5 |
| Haiti | 58.1 | 48.3 | 52.9 | 50.6 | 41.9 | 51.7 | 47.1 | 49.4 |
| Honduras | 53.2 | 46.7 | 48.5 | 52.9 | 46.8 | 53.3 | 51.5 | 47.1 |
| Mexico | 58.2 | 53.7 | 54.0 | 53.9 | 41.8 | 46.3 | 46.0 | 46.1 |
| Nicaragua | 36.7 | 35.0 | 39.8 | 50.4 | 63.3 | 65.0 | 60.2 | 49.6 |
| Panama | 62.8 | 52.1 | 50.0 | 57.7 | 37.2 | 47.9 | 50.0 | 42.3 |
| Paraguay | 45.0 | 40.7 | 50.2 | 42.8 | 55.0 | 59.3 | 49.8 | 57.2 |
| Peru | 57.1 | 50.4 | 47.9 | 53.4 | 42.9 | 49.6 | 52.1 | 46.6 |
| Dominican Rep. | 64.7 | 70.9 | 59.8 | 60.3 | 35.3 | 29.1 | 40.2 | 39.7 |
| Uruguay | 73.1 | 66.1 | 59.1 | 62.6 | 26.9 | 33.9 | 40.9 | 37.4 |
| Venezuela | 56.0 | 56.3 | 57.2 | 60.6 | 44.0 | 43.7 | 42.8 | 39.4 |
| Total | 54.8 | 55.8 | 53.4 | 51.7 | 45.2 | 44.2 | 46.6 | 48.3 |

Source: United Nations (26).

1970s. The only exceptions to this general trend were Ecuador and Venezuela, where the proportions remained about the same in the 1970s as they had been 30 years before. Much of the difficulty of analysing Latin America as a continent that is homogeneous from the industrial point of view is made clear in table 8, which shows that Argentina, Brazil, and Mexico accounted for 76.7 per cent of the total gross industrial product generated in the whole of Latin America during the period 1972-1977. Finally, table 9 reflects the proportion of bank loans in the total of loans granted and the relationship of this figure to the contribution of the industrial sector to the gross domestic product.

Financing sources for Latin American industrial enterprises

Argentina is one of the few Latin American countries which over a prolonged period of time have published extensive and detailed information on the sources from which the country's private industrial firms obtain their financial resources and how they use them. This information is classified by industrial sector and size of companies. It has, therefore, been considered useful to examine what relevant conclusions may be drawn from a study of Argentina and to what degree these conclusions may be applicable to other Latin American countries for which only more fragmentary information is available.

Argentina as a case study

In their study on the period 1955-1965, Itzcovich and Feldman (19) have broken down Argentina's total financial assets and liabilities by economic units: government, public enterprises, private enterprises, the banking and non-banking sectors, households, and the external sector. On the basis of this information, it is possible to estimate the financial flows measured as net changes in the level of assets and liabilities. These statistical tables indicate that, during the period under review, the country's private enterprises were net financial debtors. Table 10 shows the annual increases in net indebtedness along with the real interest rates charged during the period 1956-1965. What this table reveals is that the private enterprises were persistently in debt throughout this period and that this indebtedness was incurred at negative real interest rates, suggesting a continuous process of subsidies and revenue

Table 5
GROSS NATIONAL SAVINGS
(Percentage of GDP)

| Country | 1960-64 | 1965-69 | 1970-74 | 1975-77 |
|----------------|---------|---------|---------|---------|
| Argentina | 18.9 | 19.0 | 20.2 | 20.5 |
| Bolivia | 6.9 | 10.2 | 16.2 | 17.5 |
| Brazil | 20.9 | 21.6 | 23.7 | 24.2 |
| Colombia | 16.7 | 17.0 | 17.3 | 19.8 |
| Costa Rica | 12.5 | 10.5 | 12.4 | 14.0 |
| Chile | 12.9 | 14.6 | 11.4 | 3.8 |
| Ecuador | 12.1 | 15.0 | 17.2 | 23.6 |
| El Salvador | 11.6 | 10.4 | 13.3 | 18.3 |
| Guatemala | 7.2 | 9.3 | 11.7 | 14.9 |
| Haiti | 4.4 | 1.5 | 4.6 | 4.4 |
| Honduras | 12.2 | 13.2 | 12.8 | 9.8 |
| Mexico | 17.1 | 19.2 | 18.9 | 21.5 |
| Nicaragua | 13.9 | 12.5 | 12.5 | 13.4 |
| Panama | 12.8 | 17.5 | 20.5 | 20.5 |
| Paraguay | 8.9 | 11.2 | 14.1 | 18.2 |
| Peru | 20.0 | 14.7 | 14.3 | 13.6 |
| Dominican Rep. | 12.1 | 7.4 | 13.1 | 17.1 |
| Uruguay | 12.6 | 13.6 | 10.1 | 9.3 |
| Venezuela | 29.3 | 27.0 | 33.4 | 37.0 |

Source: Inter-American Development Bank (3).

Table 6

INVESTMENT FINANCING

(Percentages at constant 1970 prices)

| Country | National saving | | | | | | | | | External saving | | |
|----------------|-----------------|---------|---------|--------------------|-------------------|---------------------|---------|--------------------|-----------------------|-----------------|---------|---------|
| | TOTAL | | | Public | | | Private | | | 1965-69 | 1970-74 | 1975-77 |
| | 1965-69 | 1970-74 | 1975-77 | 1965-69 | 1970-74 | 1975-77 | 1965-69 | 1970-74 | 1975-77 | | | |
| Argentina | 99.7 | 99.6 | 100.8 | 18.4 | 8.3 ^{b/} | - | 81.6 | 91.7 ^{a/} | - | 0.3 | 0.4 | (-0.8) |
| Bolivia | 69.8 | 83.9 | 75.9 | 3.8 ^{a/} | - | - | 96.2 | - | - | 30.2 | 16.1 | 24.1 |
| Brazil | 94.7 | 88.5 | 91.0 | - | 29.5 | 21.1 ^{c/} | - | 70.5 | 78.9 ^{c/} | 5.3 | 11.5 | 9.0 |
| Colombia | 82.4 | 86.5 | 103.6 | 33.5 | 26.6 | 22.6 ^{d/} | 66.5 | 73.4 | 77.4 ^{d/} | 7.6 | 13.5 | (-3.6) |
| Costa Rica | 62.1 | 58.1 | 74.3 | 13.5 | 12.3 | 16.3 ^{c/} | 86.5 | 87.7 | 83.7 ^{c/} | 37.9 | 41.9 | 25.7 |
| Chile | 93.2 | 76.2 | 74.5 | 47.2 | (-3.8) | 183.2 ^{d/} | 52.8 | 103.8 | (-83.2) ^{d/} | 6.8 | 23.8 | 25.5 |
| Ecuador | 68.6 | 75.8 | 83.8 | 35.2 | 42.6 | 41.4 ^{c/} | 64.8 | 57.4 | 58.6 ^{c/} | 31.4 | 24.2 | 16.2 |
| El Salvador | 83.7 | 86.8 | 95.0 | - | - | - | - | - | - | 6.3 | 13.2 | 5.0 |
| Guatemala | 87.2 | 92.5 | 95.7 | 12.3 ^{a/} | - | - | 87.7 | - | - | 12.8 | 7.5 | 4.3 |
| Haiti | 77.6 | 78.2 | 68.7 | - | - | - | - | - | - | 2.4 | 21.8 | 31.3 |
| Honduras | 70.3 | 73.7 | 64.0 | 15.7 | 14.0 | 40.2 ^{c/} | 84.3 | 86.0 | 59.8 ^{c/} | 29.7 | 26.3 | 35.0 |
| Mexico | 88.9 | 86.5 | 89.3 | - | - | - | - | - | - | 11.1 | 13.5 | 10.7 |
| Nicaragua | 64.8 | 71.7 | 63.0 | 16.6 | 21.9 | 33.4 ^{d/} | 83.4 | 78.1 | 66.6 ^{d/} | 35.2 | 28.3 | 37.0 |
| Panama | 79.1 | 70.2 | 81.0 | 14.4 | 8.9 | 3.8 ^{c/} | 85.6 | 91.1 | 96.2 ^{c/} | 20.9 | 29.8 | 19.0 |
| Paraguay | 64.3 | 83.6 | 84.7 | 16.4 | 8.5 | 2.0 ^{d/} | 83.6 | 91.5 | 98.0 ^{d/} | 35.7 | 16.4 | 15.3 |
| Peru | 88.4 | 88.2 | 60.4 | 3.1 | 4.0 | - | 96.9 | 96.0 | - | 11.6 | 11.8 | 39.6 |
| Dominican Rep. | 56.5 | 72.9 | 86.0 | - | - | - | - | - | - | 43.5 | 27.1 | 14.0 |
| Uruguay | 97.7 | 87.7 | 83.8 | 11.7 | - | - | 88.3 | - | - | 2.3 | 12.3 | 16.2 |
| Venezuela | 97.4 | 112.1 | 109.4 | 27.4 | 29.6 | 44.0 ^{d/} | 72.6 | 70.4 | 56.0 ^{d/} | 2.6 | (-12.1) | (-9.4) |
| TOTAL | 92.0 | 90.9 | 92.3 | - | - | - | - | - | - | 8.0 | 9.1 | 7.7 |

a/ Refers to the period 1966-1969

c/ Year 1975

b/ Refers to the period 1970-1973

d/ Average for the years 1975-1976

Source: United Nations (26).

Table 7

SHARE OF MANUFACTURING IN THE GENERATION
OF GDP IN LATIN AMERICA

| Country | 1940-44 | 1945-49 | 1950-54 | 1955-59 | 1960-64 | 1965-69 | 1970-74 | 1975-78 |
|---------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Argentina | 23.7 | 24.6 | 23.8 | 26.3 | 26.9 | 29.3 | 31.9 | 31.1 |
| Bolivia | - | - | 12.7 | 12.3 | 11.8 | 12.9 | 12.8 | 13.8 |
| Brazil | 16.0 | 18.7 | 21.3 | 23.8 | 26.9 | 26.9 | 29.4 | 29.6 |
| Colombia | 11.6 | 11.4 | 13.8 | 15.4 | 16.6 | 17.1 | 18.4 | 19.3 |
| Costa Rica | - | 11.4 | 12.0 | 12.6 | 12.9 | 14.3 | 15.7 | 17.3 |
| Chile | 21.0 | 22.9 | 23.7 | 24.5 | 26.3 | 27.9 | 28.3 | 22.5 |
| Ecuador | 18.0 | 18.7 | 15.7 | 15.3 | 16.0 | 16.8 | 17.6 | 19.8 |
| El Salvador | - | 12.1 | 13.1 | 13.7 | 14.3 | 17.4 | 17.9 | 17.3 |
| Guatemala | - | - | 11.3 | 11.5 | 12.3 | 14.1 | 14.6 | 14.4 |
| Haiti | - | - | 8.2 | 8.4 | 8.9 | 8.5 | 10.4 | 12.0 |
| Honduras | 7.4 | 7.7 | 10.2 | 12.0 | 14.6 | 13.5 | 14.3 | 17.1 |
| Mexico | 17.9 | 18.6 | 18.0 | 19.0 | 19.8 | 22.3 | 23.7 | 24.6 |
| Nicaragua | - | 11.4 | 11.2 | 12.3 | 14.4 | 16.8 | 19.3 | 20.0 |
| Panama | - | 7.3 | 9.2 | 10.6 | 13.5 | 15.2 | 15.4 | 13.9 |
| Paraguay | 14.8 | 14.9 | 16.6 | 15.4 | 16.0 | 16.7 | 17.7 | 18.0 |
| Peru | - | 13.8 | 14.5 | 15.8 | 17.8 | 20.2 | 21.5 | 22.0 |
| Dominican Rep | - | - | 13.0 | 13.1 | 14.9 | 14.5 | 16.8 | 17.6 |
| Uruguay | 18.0 | 18.2 | 21.9 | 24.0 | 23.7 | 24.0 | 24.5 | 26.2 |
| Venezuela | 14.2 | 12.6 | 11.8 | 14.6 | 14.2 | 14.8 | 15.3 | 15.3 |
| Total | 18.6 | 18.3 | 19.2 | 20.7 | 22.0 | 23.3 | 25.2 | 25.3 |

Sources: United Nations (25);
United Nations (25);
Inter-American Development Bank (4).

Table 8

DISTRIBUTION OF INDUSTRIAL GDP IN LATIN AMERICA
(Percentages)

| Country | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Argentina | 20.3 | 19.7 | 19.6 | 18.7 | 17.0 | 16.0 |
| Bolivia | 0.4 | 0.3 | 0.4 | 0.4 | 0.4 | 0.7 |
| Brazil | 32.4 | 34.2 | 34.8 | 35.8 | 37.7 | 33.8 |
| Colombia | 4.7 | 4.8 | 4.8 | 4.9 | 5.0 | 5.3 |
| Costa Rica | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 |
| Chile | 5.1 | 4.4 | 4.0 | 2.8 | 2.9 | 3.8 |
| Ecuador | 0.9 | 0.9 | 0.9 | 1.0 | 1.1 | 1.4 |
| El Salvador | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 |
| Guatemala | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 |
| Haiti | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Honduras | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 |
| Mexico | 23.7 | 23.6 | 23.4 | 24.0 | 23.3 | 22.2 |
| Nicaragua | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Panama | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 |
| Paraguay | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Peru | 3.4 | 3.4 | 3.4 | 3.5 | 3.5 | 3.6 |
| Dominican Rep. | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.9 |
| Uruguay | 1.3 | 1.2 | 1.1 | 1.2 | 1.2 | 1.1 |
| Venezuela | 4.1 | 4.0 | 4.0 | 4.1 | 4.3 | 7.8 |
| Total for Latin America | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: United Nations (25).

Table 9
INDUSTRIAL FINANCING IN LATIN AMERICA: 1970-1972
(Percentages)

| Countries | Percentage share of loans to industry in total bank loans (official and private) (1) | Share of industry in GDP (2) | Ratio of (1) to (2) |
|-------------------------------|---|------------------------------------|---------------------|
| Argentina | 32.9 | 33.4 | 0.98 |
| Bolivia | 13.3 | 14.0 ^{d/} | 0.95 |
| Brazil | 33.1 | 24.1 | 1.39 |
| Chile ^{a/} | 40.5 | 27.9 | 1.45 |
| Colombia | 10.9 | 19.1 | 0.57 |
| Costa Rica | 19.0 | 19.3 ^{d/} | 0.98 |
| Ecuador | 13.3 | 17.6 | 1.04 |
| El Salvador | 11.9 | 19.1 | 0.62 |
| Guatemala | 27.4 | 15.9 | 1.72 |
| Honduras | 22.9 | 14.5 | 1.57 |
| Mexico | 25.0 | 22.9 | 1.09 |
| Nicaragua | 28.1 | 18.5 | 1.52 |
| Panama | 4.5 | 15.9 | 0.28 |
| Paraguay | 21.9 | 16.4 | 1.34 |
| Peru | 37.5 | 20.8 | 1.79 |
| Dominican Rep. | 34.4 | 18.7 | 1.84 |
| Trinidad-Tobago ^{b/} | 18.8 | 19.4 | 0.97 |
| Uruguay ^{c/} | 49.5 | 20.9 ^{d/} | 2.37 |
| Venezuela | 33.1 | 12.2 | 2.71 |

a/ 1969-1971.

b/ 1967-1978.

c/ 1969-1971.

d/ Also includes mining.

Source: Hugh H. Schwartz (20); appendix, tables 3A and 3B.

transfers to the private sector. In other words, the net financial debtor position of these enterprises indicates that there was a continuous gap between their investment and their savings, which they were able to close by borrowing from other sectors. Who then financed this gap? From the Itzcovich-Feldman study it appears that it was the Government (through fiscal debts), the banking and non-banking system, and the external sector that helped to finance the savings deficit of these companies at negative real interest rates.

Since table 10 shows that Argentina's private enterprises persistently benefited, during the period in question, from a position of net financial indebtedness financed at negative real interest rates, it might now be of interest to ascertain - limiting the inquiry in this case to the industrial enterprises only - the relative importance of this indebtedness in the total financing of the enterprises. This leads us to an analysis of the sources and uses of funds of industrial enterprises. Fortunately, in the case of Argentina a number of empirical studies have been carried out on this subject covering industrial companies over the period 1955-1969. Although, for certain years, these studies break down the data according to industrial sector and size of enterprise, for the purposes of this paper I shall examine only the flow of funds for the total manufacturing sector (table 11). From this table it will be clear that self-financing (contributions by partners and retained profits) accounted for a substantial percentage of total financing - between 34.4 and 56.7 per cent. The balance is obtained through loans, generally obtained at negative real interest rates.

Continuing this line of inquiry, it is interesting to determine to what extent this external financing is obtained on a short- or long-term basis. On this point, table 12, which reflects the financial structure in Argentina and selected countries, is instructive in that it indicates that in Argentina company self-financing (42 per cent) accounts for very nearly the same proportion as in such countries as the Federal Republic of Germany (46 per cent), France (47.7 per cent), and Italy (43.4 per cent). The major difference is in the negligible importance of long-term external financing in Argentina (8 per cent) in comparison with the other countries.

This weakness in the Argentine financial system has repeatedly prompted the Government to consider the need to provide fiscal incentives to the share market as the best way of correcting this deficiency. There is a widely held and strong belief that an over-all solution to the problem of industrial financing

Table 10

ARGENTINA: NET FINANCIAL INDEBTEDNESS OF PRIVATE ENTERPRISES AND REAL INTEREST RATES

| Year | Annual increases in the net financial indebtedness of private enterprises <u>1/</u> (In millions of dollars at 1960 prices) | Real interest rates <u>2/</u> (Annual figures) |
|------|---|---|
| 1956 | 53.144 | -6.04 |
| 1957 | 29.000 | -12.62 |
| 1958 | 42.357 | -26.53 |
| 1959 | 94.349 | -45.03 |
| 1969 | 115.926 | -6.81 |
| 1961 | 121.147 | -4.81 |
| 1962 | 83.661 | -13.03 |
| 1963 | 17.527 | -5.60 |
| 1964 | 29.959 | -1.04 |
| 1965 | 23.309 | -15.43 |

Sources: 1/ Mario S. Brodersohn (6).

2/ Ernesto Gaba (13).

Table 11

ARGENTINA: SOURCES AND USES OF FUNDS BY PRIVATE INDUSTRIAL ENTERPRISES SET UP AS LIMITED COMPANIES (SOCIEDADES ANONIMAS)
1956-1969
(Percentages)

| | 1956-59 | 1960-62 | 1963-64 | 1965-66 | 1967-69 |
|--|--------------|--------------|--------------|--------------|--------------|
| A. <u>Total external sources</u> | <u>58.4</u> | <u>40.1</u> | <u>52.9</u> | <u>50.7</u> | <u>42.3</u> |
| 1. Commercial debts | 19.6 | 14.0 | 11.6 | 22.9 | 4.6 |
| 2. Bank debts | 15.9 | 8.9 | 10.6 | 11.3 | 21.2 |
| 3. Financial debts | 4.7 | 6.3 | 12.8 | 4.5 | 12.2 |
| 4. Other debts | 9.2 | 6.9 | 11.1 | 8.0 | 1.4 |
| 5. Commissions | 9.0 | 4.0 | 7.4 | 12.0 | 3.0 |
| B. <u>Internal sources (contributions by partners and profits)</u> | <u>38.2</u> | <u>56.7</u> | <u>42.0</u> | <u>34.4</u> | <u>43.1</u> |
| C. <u>Other</u> | <u>3.4</u> | <u>3.2</u> | <u>5.1</u> | <u>6.9</u> | <u>14.6</u> |
| TOTAL SOURCES (A+B+C) | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |
| A. <u>Financial investment</u> | <u>36.8</u> | <u>37.7</u> | <u>57.3</u> | <u>45.0</u> | <u>50.2</u> |
| 1. Cash assets | 3.9 | 2.5 | 3.7 | 2.3 | 6.7 |
| 2. Credits granted | 28.1 | 23.8 | 37.8 | 38.2 | 14.4 |
| 3. Others | 4.8 | 11.4 | 15.8 | 4.5 | 29.1 |
| B. <u>Real net investment</u> | <u>63.2</u> | <u>62.3</u> | <u>42.7</u> | <u>55.0</u> | <u>49.8</u> |
| 1. Net fixed capital formation | 22.5 | 41.3 | 27.5 | 21.1 | 35.9 |
| 2. Variations in stock | 40.7 | 21.0 | 15.2 | 33.9 | 13.9 |
| C. TOTAL USES (A+B) | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |

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Source: Mario S. Brodersohn (6).

can be achieved through invigoration of the share market. However, historical experience in developed countries indicates that the share market can become a relatively important source of financing only at the more advanced stages of development, and that it has generally been the investment and development banking system that has played a fundamental role in development financing. Hence it is important to modify the guidelines governing the activities of the banking system so as to promote long-term financing. But how are these changes to be brought about in a country which has long been in an almost continual state of financial repression? This question suggests that it would be interesting to know whether the elimination of financial repression through the liberalization of interest rates constitutes per se a factor that facilitates the creation of a long-term financial market. I shall defer the answer to this question until the second part of this paper, in which the situation in Argentina is analysed in greater detail. But before proceeding to a consideration of the theory and effects of financial repression, I must continue with the analysis of the situation with regard to financing sources in the other countries of Latin America.

Financing sources for industrial enterprises in other countries of Latin America

Very few countries can supply data on their industrial financing sources. An interesting recent study on this subject is the one on Uruguay prepared by Ricardo Pascale (28). Using the results of a sample for the period 1972-1976, that author developed a table indicating the sources and uses of funds, broken down by enterprise size (table 13). This table is supplemented by table 14, which shows the financing structure according to company-owned resources (net worth) and commercial and financial indebtedness. It is interesting to compare the results obtained for Argentina and Uruguay (see tables 11 and 13), since both studies cover periods of financial repression. The most significant conclusions to be drawn from the Argentine case and their application to Uruguay may be summarized as follows:

(a) In both countries, internal sources (self-financing) provided more than 50 per cent of total financial requirements, thus approaching international levels. ^{1/} Theoretically, this is a surprising result, since, given the fact of negative real interest rates, one should have expected the incidence of indebtedness to be greater; however, these results reveal that in a context

Table 12

COMPARISON OF THE STRUCTURE OF LIMITED COMPANY FINANCING IN SELECTED COUNTRIES
1965

| | Argentina | Federal Republic of Germany | United States | France | Italy | United Kingdom |
|-----------------------------------|--------------|-----------------------------------|---------------|--------------|--------------|-------------------|
| 1. Company's own funds | 42.0 | 46.0 | 58.9 | 47.7 | 43.3 | 57.6 |
| 2. Long-term debts | 8.0 | 23.0 | 16.8 | 15.3 | 25.1 | 14.1 |
| 3. Short-term debts | 50.0 | 31.0 | 24.3 | 37.0 | 31.6 | 28.3 |
| Total: Own funds plus liabilities | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |

Note: The figures have been obtained from consolidated balance sheets. This explains, in the case of Argentina, the differences with respect to Table 11, which is based on cash flow.

Source: Ernesto Feldman and S. Itzcovich (10).

of financial repression there is less monetization (financial deepening) of the economy and consequently a diminished lending capacity on the part of the financial system. This in turn prompts the business sector, faced with a shrinking credit supply, to increase its own funds for financing purposes.

(b) In the case of Uruguay, the breakdown of companies by size produces the results that might be expected in a financially repressed, tight-credit market: the large enterprises are the ones with the greatest access to subsidized credit. ^{2/} In Uruguay, the larger enterprises obtain about half of their capital through borrowing and half through self-financing, whereas in the smaller companies the ratio is 72 per cent through self-financing and 29 per cent through loans. In Argentina, on the other hand, both large and small enterprises resort to borrowing in the same proportion (table 15).

(c) One of the most significant characteristics of Argentina is that while the indebtedness/self-financing ratio is similar to that found in a number of European countries (table 12), indebtedness tends to be more heavily concentrated in short-term loans. The same is also true of Uruguay (table 16).

Ecuador may be regarded as a country which, because of the oil boom, has characteristics different from those of Argentina and Uruguay and as one in which there has been rapid development and relative price stability. The GDP growth rate increased from 5.5 per cent per annum in the period 1960-1970 to 8.5 per cent in the period 1970-1978. The combination of a moderate rate of inflation (10 per cent in 1979) and maximum interest rates for loans of 14-16 per cent per annum (including commissions) has enabled Ecuador to avoid a climate of financial repression, although here too, as in the case of Argentina and Uruguay, the high degree of short-term financing (see table 17) continues to pose a problem, though not to the same extent as in the nations of the Southern Cone.

^{1/} In Brazil (1968) self-financing by industrial enterprises also accounted for 50 per cent of total funds; see Schwartz (30).

^{2/} Using econometric methods, Tybout has shown in a study on Colombia (33) that in a climate of financial repression the tightening of credit tends to favour the larger companies at the expense of smaller ones. This kind of discrimination is not observed in countries with an unrepressed financial market, like the United States.

Table 13

URUGUAY: SOURCES AND USES OF FUNDS IN THE MANUFACTURING INDUSTRY, 1972-1976
(Percentages)

| | Large enterprises ^{1/} | Medium-sized enterprises | Small enterprises |
|----------------------------|---------------------------------|--------------------------|-------------------|
| A. <u>External sources</u> | <u>48.5</u> | <u>37.1</u> | <u>27.9</u> |
| B. <u>Internal sources</u> | <u>51.5</u> | <u>62.9</u> | <u>72.1</u> |
| 1. Profits, depreciation | 43.8 | 37.6 | 68.7 |
| 2. Capital contributions | 2.0 | 3.8 | 3.0 |
| 3. Depletion of assets | 5.7 | 21.5 | 0.4 |
| TOTAL SOURCES (A+B) | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |
| A. Current assets | 35.7 | 31.1 | 45.4 |
| B. Investments | 28.2 | 31.5 | 22.5 |
| C. Repayment of debts | 14.1 | 6.6 | 14.2 |
| D. Dividends | 22.0 | 26.8 | 17.9 |
| TOTAL USES (A+B+C) | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |

Note: Large enterprises: employing more than 200 workers;
Medium-sized enterprises: employing between 50 and 199 workers;
Small enterprises: employing between 10 and 49 workers.

^{1/} Not including the food industry.

Source: Ricardo Pascala (28).

Table 14

URUGUAY: FINANCING STRUCTURE, 1976.
(Percentages)

| | Large enterprises | Medium-sized enterprises | Small enterprises | Average |
|-----------------------------------|-------------------|--------------------------|-------------------|--------------|
| 1. Company's own funds | 22.5 | 29.3 | 45.0 | 31.2 |
| 2. Long-term debts | 17.6 | 13.6 | 7.6 | 13.4 |
| 3. Short-term debts | 59.9 | 57.1 | 47.4 | 55.4 |
| Total: Own funds plus liabilities | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |

Source: Ricardo Pascale (28).

Table 15

ARGENTINA AND URUGUAY: FINANCING SOURCES ACCORDING TO SIZE OF INDUSTRIAL ENTERPRISES
(Percentages)

| | Large enterprises | | Medium-sized enterprises | | Small enterprises | |
|-----------------------|-------------------|------------------|--------------------------|------------------|-------------------|------------------|
| | Internal Sources | External Sources | Internal Sources | External Sources | Internal Sources | External Sources |
| Argentina (1967-1969) | 50.7 | 49.3 | 53.9 | 46.1 | 50.4 | 49.6 |
| Uruguay (1972-1976) | 51.5 | 48.5 | 62.9 | 37.1 | 72.1 | 27.9 |

Note: In Argentina, size has been defined on the basis of sales volume; in Uruguay, according to the number of workers employed.

Sources: Argentina: Mario S. Brodersohn (6).
Uruguay: Ricardo Pascale (28).

Table 16

ARGENTINA AND URUGUAY: COMPARISON OF FINANCING
(Percentages)

| | ARGENTINA (1977) | URUGUAY (1976) |
|-----------------------------|---------------------|-------------------|
| 1. Company's own funds | 56.7 | 31.2 |
| 2. Long-term debts | 6.5 | 13.4 |
| 3. Short-term debts | 36.8 | 55.4 |
| Total: Own funds plus debts | <u>100.0</u> | <u>100.0</u> |

Sources: Argentina: Hernán Aldabe (1).

Uruguay: Ricardo Pascale (28).

Note: The figures refer to data consolidated from annual balance sheets and inventory reports, and not to cash flow, as in Tables 10 and 12.

Table 17
ECUADOR: FINANCING STRUCTURE OF INDUSTRIAL CORPORATIONS
(Percentages)

| | 1974 | 1975 | 1976 |
|-----------------------------------|--------------|--------------|--------------|
| Short-term debts | 35.1 | 37.7 | 40.4 |
| Long-term debts | 21.7 | 21.1 | 21.6 |
| Net worth | 43.2 | 41.3 | 37.9 |
| Total: Net worth plus liabilities | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |

Source: Superintendencia de Compañías (Companies Control Board)

Because of its more moderate inflation and its climate of financial repression, Colombia may be thought of as being midway between Ecuador, on the one hand, and Argentina and Uruguay (before the liberalization of interest rates), on the other. Table 18 presents the principal indicators of the financing structure of industrial enterprises, by size, for the years 1976 to 1977. The pattern in this case will be seen to resemble that of Uruguay with respect to the effect of enterprise size on financing structures. A conclusion previously stated is thus borne out: the self-financing/indebtedness ratio is higher in small enterprises than in medium-sized and large enterprises. The reason for this lies in the fact that in a restricted credit market larger companies have easier access to institutionalized credit through financial institutions (in Colombia these account for slightly over 30 per cent of total financing needs) than do the smaller firms (somewhat below 20 per cent). In Mexico, where there are special financing programmes for medium-sized and small-scale industrial enterprises, loans to this group of enterprises accounted in 1979 for less than 4 per cent of total bank loans and 10 per cent of loans to the industrial sector.

The analysis of the situation in Argentina, Colombia, Ecuador, and Uruguay clearly shows that not all enterprises enjoy "equal opportunities" with respect to access to credit in a market financially repressed through negative real interest rates and other credit regulations. For this reason, when studying industrial financing attention must be given to the structure of interest rates and to other regulations that inhibit the development of a competitive financial market. That is the purpose of the second part of this paper.

Table 18

COLOMBIA: STRUCTURE OF INDUSTRIAL ENTERPRISE FINANCING - 1976-1977
(Percentages)

Enterprises classified according to their assets

| | Small ^{1/} | | Medium-sized ^{2/} | | Large ^{3/} | |
|-----------------------------------|---------------------|------------|----------------------------|------------|---------------------|------------|
| | 1976 | 1977 | 1976 | 1977 | 1976 | 1977 |
| LIABILITIES (1+2+3) | <u>59</u> | <u>60</u> | <u>68</u> | <u>72</u> | <u>62</u> | <u>64</u> |
| 1.- Commercial debts | 17 | 17 | 16 | 16 | 14 | 14 |
| 2.- Financial debts | 19 | 17 | 32 | 34 | 28 | 30 |
| - Short-term | (10) | (10) | (19) | (21) | (17) | (19) |
| - Long-term | (9) | (7) | (13) | (13) | (11) | (11) |
| 3.- Others ^{4/} | 20 | 23 | 20 | 22 | 20 | 20 |
| NET WORTH | <u>41</u> | <u>40</u> | <u>32</u> | <u>28</u> | <u>38</u> | <u>36</u> |
| TOTAL: LIABILITIES PLUS NET WORTH | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> |

^{1/} Up to 20 million pesos in assets;

^{2/} From 20 to 100 million pesos;

^{3/} More than 100 million pesos;

^{4/} Includes debts to workers and employees, unpaid taxes, etc.

Source: Superintendencia de Compañías (Companies Control Board)

Chapter II

FINANCIAL REPRESSION AND THE FINANCING OF
ECONOMIC DEVELOPMENT

In the preceding chapter, an attempt was made to sketch the development of savings and investment in each of the Latin American countries, while presenting, for those few countries on which statistics are available, the flow, sources and use of funds for industrial enterprises. The aim of that chapter was to give an over-all picture of the savings and investment capacity of Latin American countries and the contribution of the industrial sector to their economies, and, finally, to assess the structure of industrial sector financing in certain countries.

A good many of the studies on this subject conducted during the 1950s and 1960s adopted this type of approach. In general, they all started from the premise that savings and investment were determined to a great extent by the economic growth rate. The interdependence between savings, investment and economic growth began to be seen in a different context in the 1970s, when there was a resurgence of inflation. That was because the widespread high inflation rates of these years and the repression of the financial market resulting from the policy of maximum interest rates pursued in most of the Latin American countries began to play an increasingly important role. This combination of high inflation rates and maximum interest rates - the latter, of course, being lower than the former - created a financial market that was in a constant state of disequilibrium, which in turn affected the level of saving and investment in these countries.

This situation gave rise to the approaches adopted by McKinnon (20) and Shaw (29) in 1973 with regard to financial repression, which may be regarded as the general prevalence of negative real interest rates. ^{1/} Of course, this

^{1/} A real interest rate (R) is defined according to the following formula:

$$R = \frac{1 + r}{1 + \frac{\Delta P}{P}} - 1 = \frac{r - (\Delta P/P)}{1 + (\Delta P/P)}$$

where r is the nominal interest rate and $\Delta P/P$ is the annual increase in the level of prices.

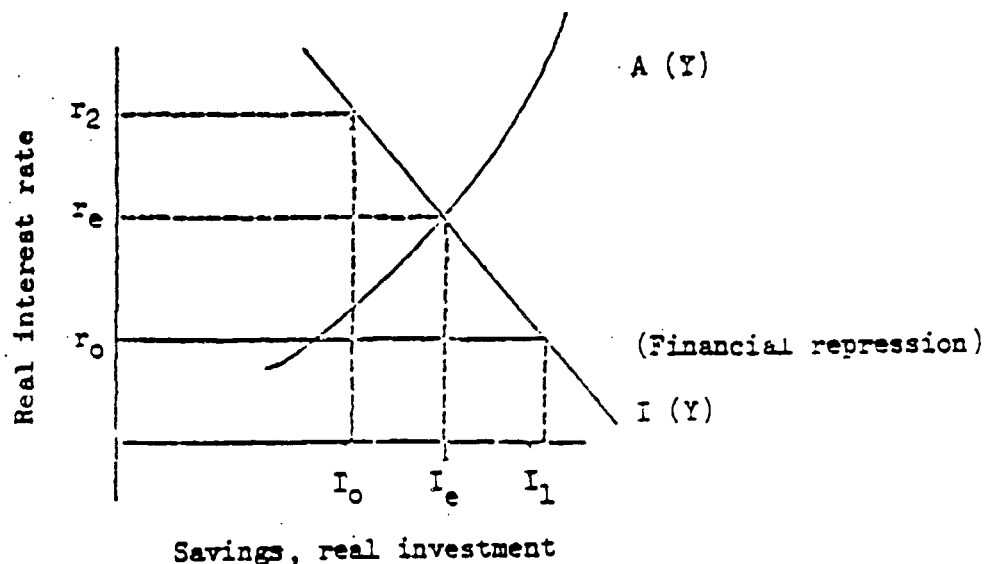
approach does not exclude other forms of financial repression such as the regulation of the purpose of bank loans and restrictions on the movement of funds into and out of the country. For the purposes of this study I shall confine myself to the subject of real interest rates.

The effects of financial repression in industrial financing

The approaches adopted by McKinnon and Shaw can be illustrated by means of diagram 1, which shows savings and real investment as functions of the real interest rate. One of the basic assumptions in this model is that investment is financed exclusively from sources external to the investor or, where this is not the case, that the latter maintains a constant relationship between his own self-financing and the external sources for each level of real interest rates. In other words, this type of analysis can be used for developing economies with sufficiently developed machinery to attract savings and channel them towards activities requiring such money.

Diagram 1 shows that in a market with free interest rates the equilibrium between savings (A) and investment (I) - for a real income rate Y - is achieved when the real interest rate is equal to r_e .

Diagram 1



The rate r_0 represents the combination of a political decision to set a nominal maximum interest rate and a higher rate of inflation. Therefore, r_0 is situated below the level of equilibrium r_e . What are the consequences of this state of disequilibrium? The effects are manifested in the volume of financial

savings and in the volume and quality of investment. Let us analyse each of these effects separately, beginning with the effects of a real interest rate r_0 that is lower than the level of equilibrium r_e on the amount of financial savings. According to diagram 1, the volume of savings originating at a real interest rate r_0 is lower (OAo) than that which would be obtained under conditions of equilibrium (OAe). In other words, the volume of financial savings generated in the country is reduced.

The second consequence relates to the total amount of investment. As mentioned above, when the real interest rate is equal to r_0 , the supply of savings is reduced, which indicates that a smaller volume of investment can be financed than would be possible in a situation of equilibrium. Therefore, the economy ends up investing less (OIo) with a real interest rate r_0 than with an equilibrium rate r_e (OIE). In addition, diagram 1 shows that if the maximum real interest rate r_0 is applied only to savings and not to loans, the investors at an investment level OIo would be prepared to pay a real interest rate r_2 , higher than r_0 , which of course would benefit only the financial intermediaries, who would pay an interest rate r_0 on savings deposits and would recover a higher interest rate of r_2 on loans. In order to avoid this excess profit at the stage of financial intermediaries, and also to supply money at a lower interest rate, the Governments usually establish that the maximum interest rate r_0 should apply to both deposits and loans. In this case, when the interest rate for loans is r_0 (lower than both r_2 and r_e), companies would be prepared to invest at this rate r_0 a larger amount represented by OI₁. The fact that, with an interest rate r_0 , savings are generated only to an amount of OA₀ indicates that financing is possible only up to OI₁. The difference between OI₁ and OI₀, therefore, suggests an excess of investment demand or a savings deficit of I₀I₁. This excess of demand leads to a rationing of the limited savings with the aim of equating savings and investment. This rationing is not carried out through the market via the price of money, but according to a series of discretionary criteria.

This policy of credit rationing is usually based on criteria such as the quality of the guarantees given by the investor, the prestige, size and age of the company or the "access" to the bank official responsible for granting the loan ^{1/}.

^{1/} One of the most detailed studies of the different mechanisms used in rationing credit was made by Tybout (33) for Colombia.

The third consequence of a policy of maximum interest rates relates to the quality of the investment. It is derived from the fact that the policy of rationing credit generally tends to increase the dualism of the industrial production structure, whereby only certain enterprises have access to large amounts of subsidized credit - money which may end up being invested in over-capitalized and under-utilized production activities - while other industrial enterprises must first generate their own financial savings (self-financing), even for projects which are highly profitable from a social point of view, because of the difficulties they encounter when trying to obtain subsidized credit.

Diagram 1, therefore, reveals a situation in which the financial market is repressed, because the final volume of investment is reduced in accordance with the supply of real savings, which is smaller than that generated with an "equilibrium" real interest rate. In this situation of disequilibrium it may be observed that, compared to a situation of equilibrium, there is a smaller real demand for real funds (financial deepening), which in turn reduces the level of real investment (assuming that all the investment is financed from external funds or that there is a constant relationship between self-financing and external funds), and also has a negative effect on the composition of the investment and the degree to which the existing capital stock is used.

The liberalization of the interest rate and/or the reduction of the inflation rate therefore makes it possible to reach a maximum level of savings and real investment (I_e) at the "equilibrium" real interest rate r_e . Moreover, in this situation of equilibrium the efficiency of investment is also improved, which in turn has a multiplier effect on economic growth, and hence on savings and investment also. It follows that the political decision to abolish maximum interest rates and/or reduce the inflation rate results in the simultaneous attainment of a maximum level of investment and maximum efficiency.

According to the new approaches to financial repression, the real interest rate must be positive in the long term, since in an expanding economy the marginal rate of return on capital is also real and positive. In other words, positive real interest rates promote a greater flow of real savings; at the same time there is no danger that there will be nowhere to channel these savings to, since the marginal rate of return on capital in countries with expanding economies is also real and positive. As diagram 1 demonstrates, the savings

and investment curves cross (at point r_e) at a positive real interest rate and rate of return on capital. Therefore, policies aimed at achieving positive real interest rates in the long run, enable the economy to attain its level of equilibrium.

In short, the new trends of opinion suggest that the conversion of a policy of negative real interest rates into one based on positive real rates, even when the rates of interest are liberalized and/or the rate of inflation is reduced, makes it possible to attain the following objectives:

- (a) An increase in the real demand for money (financial deepening);
- (b) As a result of the latter, a significant increase in financial savings, which constitute a large part of the national savings;
- (c) The increase in savings makes it possible to finance a higher level of investment through the activities of financial intermediaries between the savers and the investors;
- (d) When real interest rates are negative, the amount of financial savings is lower, thus reducing access via the banks to external funds for the financing of a given level of investment. This indicates that with negative real interest rates self-financing is a prerequisite for investment, and, in this situation, in which the saver and the investor are one and the same, investment may sometimes be realized which is not necessarily profitable from the social point of view, although it might well be so from the private point of view. Within the context of financial repression and the stimulation of self-financing, this investment tends to be of a speculative nature, its aim being to afford protection against inflation (inflation hedges); hence, there are investments in land, jewellery, foreign exchange, etc., intended to protect savings. Consequently, positive real interest rates make it possible to achieve not only a higher level of real investment, but also to improve the quality of the investment and the utilization of the existing stock of capital through offering a greater volume of funds for working capital loans.^{1/}

^{1/} Of course, in stating that an increase in the real interest rate increases real investment, we are referring to an initial stage of disequilibrium. In terms of diagram 1, this is represented by the shift from r_0 to r_e . From r_e onwards, any increase in the real interest rate begins to reduce the real investment.

There are only very few empirical studies aimed at verifying the above hypotheses on the positive interrelation between a real interest rate, real demand for money, financial savings and the level and composition of real investment. The necessity for empirical evaluation of the financial repression approach becomes clear if we bear in mind the importance of the assumptions on which this theory is based. In particular, assigning some degree of importance to the relation between rates of interest, savings and investment means to some extent minimizing the influence that the level, and rate of growth of real income, income distribution and other such factors can have on savings and investment. All this suggests that before adopting a literal approach to the interrelation between rates of interest, savings and investment, one should first look at the conclusions reached in the few empirical studies that have been conducted on this subject in Latin America. The results of these studies are not conclusive on this point. Probably there is a far greater consensus with respect to the existence and direction of the effects of financial repression (or negative real interest rates) on the real demand for money (financial deepening), this being measured in terms of the ratio between the total liabilities of the financial institutions (which generally corresponds to the definition of M_2) and the gross domestic product. The hypothesis in this case is that an increase in the real interest rate improves this ratio.

On the other hand, the empirical consensus is far more debatable as regards the positive relation between a positive real interest rate and the investment coefficient (I/GDP).^{1/} Leff and Sato (19) demonstrate with respect to Argentina, Brazil and Costa Rica the positive effects on the level of real investment and the growth rate of the GDP produced by a greater real availability of credit. Fry (11) confirms this functional relation in a comparative analysis of 61 developing countries. Fry (12) also estimates that financial repression costs around half a percentage point in economic growth for each percentage point by which the real interest rate on deposits is maintained below its equilibrium level.

^{1/} One possible reason for the low correlation between the real investment/GDP ratio and real rates of interest could be related to the form in which investment is defined in national accounts. In this connection, it may be observed that when there is financial repression the savers divert their savings towards speculative investment (inflation hedges) as protection against inflation, by investing, for example, in houses, land, consumer durables, etc. Some of these investments may be classed as such in national accounts, but for the purposes of the theory of financial repression, "inflation hedges" should be excluded from investments, since they are unproductive from the social point of view.

Hanson (18) holds that in Colombia the change from a policy of negative to positive real interest rates in 1967 made for an increase in the I/GDP ratio from 18.7 per cent in the period 1962-1968 to 20 per cent in the period 1971-1974, while also improving the mechanisms whereby production resources were assigned by reducing the marginal capital/product ratio from 3.63 in the period 1961-1967 to 2.90 in the period 1970-1974. Of course, the domestic saving/GDP ratio also improved, increasing from 15.9 per cent in 1962-1969 to 17.6 per cent in 1971-1974. In Colombia the final result of this process was a higher annual rate of economic expansion: from 4.5 per cent per annum in 1962-1967 it increased to 6.7 per cent in 1970-1974.

The studies carried out for Latin America by Vogel-Buser (32) and Galbis (16), however, did not reveal an acceptable relationship between real savings, investment/GDP and real interest rates.

The intensity of financial repression in Latin America

The preceding section highlighted the effects that are produced on savings, investment and the growth rate by policies aimed at repressing the development of financial markets through fixing maximum interest rates in conditions of high inflation rates. This brings us to the analysis of the degree and intensity of financial repression in Latin America, measured in terms of negative real interest rates, and thence to consideration of the effects of such repression on the monetization (financial deepening) of the economy.

In order to determine the intensity of financial repression, it is necessary to estimate two variables statistically: nominal interest rates and the expected rate of inflation. Of course, estimating these values raises a large number of conceptual and empirical questions. In the first place, there is no such thing as a single "interest rate"; it is more a question of the structure of rates for both savings and loans. In the second place, we are confronted with the problem of how to calculate the costs (some of them fiscal) which accompany the interest rates. The third problem is that of deciding how the expected inflation rate should be gauged and determining what price index it is appropriate to use. Any empirical analysis of this subject, therefore, involves a number of bold assumptions which need to be made before one can estimate an indicator for the real interest rate. So far the most complete study on this subject for Latin America is the one conducted by Galbis (15).

Table 19 shows the development of real interest rates in 19 Latin American countries during the period 1967-1976. The interest rates quoted are the legal rates accorded on monetary savings instruments; in countries where these legal restrictions are not observed, the level of financial repression is distorted. Of course, a more suitable indicator for measuring financial repression might have been the interest rate on loans, since the latter relates to the rate of return on capital. However, owing to the lack of statistics on such rates, Galbis had to base his estimates on the interest rates on savings deposits, which constitute the lowest level in the structure of rates for the liabilities of financial institutions,^{1/} and on other interest-bearing deposit instruments attracting higher rates of interest than the above. However, since there are more statistics available on savings deposits and since the conclusions are not greatly altered by the use of these rates, we shall base our analysis on the use of such rates as an indicator of the intensity of financial repression. The rate of inflation is measured by means of the consumer price index.^{2/}

The results of table 19 show that in 1967 the real interest rate on savings deposits was negative in only six countries out of the 19 considered: Argentina, Bolivia, Chile, Colombia, Peru and Uruguay.

The situation changed dramatically when inflation rates began to accelerate in 1973. In 1973 and 1974 all the countries had negative real interest rates. As inflation slowed down in 1975-1976 the situation improved in some countries. It must again be stressed that table 19 gives only an approximate indication of financial repression, since it is not based on the interest rate for loans, but on that for savings deposits, the latter representing a lower rate in the structure of the deposits of a financial institution. In addition, as the rate of inflation accelerated, various Latin American countries created financial instruments and/or new institutions which operated with greater flexibility as regards interest rates or index-linking. All these different variants tended to reduce the intensity of the financial repression shown in table 19.

^{1/} Excluding, of course, the effects of the inflation rate on holdings of notes and coins and on sight deposits.

^{2/} Galbis also measures the expected rate of inflation as a weighted average of past inflation rates. We shall base our analysis on present inflation, rather than on expected rates. The conclusions do not vary according to the indicator used.

Table 19

LATIN AMERICA: REAL INTEREST RATES ON SAVINGS DEPOSITS (ANNUAL PERCENTAGES)

| | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Argentina | -16.7 | -6.9 | 0.3 | -4.8 | -17.1 | -25.8 | -27.3 | -7.0 | -58.2 | -73.3 |
| Bolivia | -4.7 | 0.5 | 4.4 | 5.9 | 6.2 | 3.3 | -16.4 | -32.4 | 1.9 | 4.3 |
| Brazil | n.a. | n.a. | 3.6 | 3.0 | 5.7 | 7.0 | 7.5 | -3.0 | n.a. | n.a. |
| Chile | -14.9 | -18.3 | -20.3 | -22.7 | -13.4 | -41.9 | -77.3 | -64.0 | n.a. | n.a. |
| Colombia | -3.8 | -1.7 | -5.4 | -2.5 | -4.5 | -6.2 | -11.4 | -12.4 | -10.7 | -2.9 |
| Costa Rica | 2.9 | 0.0 | 1.2 | -0.6 | 0.9 | -0.6 | -9.7 | -19.5 | -9.7 | 2.4 |
| Dominican Rep. | 2.7 | 3.9 | 3.2 | 0.2 | -0.3 | -3.6 | -9.6 | -8.0 | -9.2 | -3.4 |
| Ecuador | 0.1 | -0.2 | -2.3 | 0.9 | -2.2 | -1.8 | -6.2 | -14.0 | -8.1 | -4.2 |
| El Salvador | 2.6 | 1.4 | 4.2 | 1.2 | 3.5 | 2.5 | -2.4 | -10.2 | -11.8 | -1.6 |
| Guatemala | 6.5 | 5.1 | 4.7 | 4.5 | 7.5 | 6.5 | -6.5 | -7.2 | -3.6 | -1.5 |
| Haiti | 5.6 | 1.2 | 1.1 | 2.0 | -6.7 | -0.2 | -15.0 | -8.6 | -10.1 | -1.6 |
| Honduras | 2.8 | 1.4 | 2.2 | 1.1 | 1.7 | 0.6 | -1.1 | -7.3 | -1.9 | 1.0 |
| Mexico | 1.5 | 2.3 | 1.0 | -0.4 | -0.6 | -0.2 | -7.1 | -16.0 | -9.8 | -10.4 |
| Nicaragua | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | -10.0 | 4.5 | 0.3 |
| Panama | 3.6 | 3.3 | 3.1 | 1.4 | 2.9 | -0.3 | -1.8 | -10.1 | -0.5 | 2.5 |
| Paraguay | 4.6 | 5.4 | 3.8 | 8.0 | 1.9 | -2.0 | -5.1 | -14.5 | 0.3 | 2.4 |
| Peru | -4.5 | -11.8 | -1.2 | 0.0 | -1.7 | -2.2 | -4.6 | -11.6 | -20.9 | -27.7 |
| Uruguay | -44.0 | -52.9 | -11.3 | -9.9 | -14.2 | -39.9 | -45.2 | -37.6 | -35.0 | 0.3 |
| Venezuela | 2.9 | 1.6 | 1.6 | 1.4 | 0.8 | 1.1 | -0.1 | -3.9 | -5.6 | -2.9 |

Source: V. Galbis (15), Table 4A.

n.a.: not available

However, even taking the above considerations into account, we could conclude that despite the endeavours to adjust the interest rates to the new inflation situation prevailing in the 1970s, the existence of financial markets repressed by negative real interest rates continued to be one of the most influential and widespread characteristics of Latin American economies.

Experiments in liberalizing interest rates in the Southern Cone of Latin America

In his important study, Galbis concludes that until 1976 in all the 19 countries of Latin America, although the financial authorities had the power to control and regulate the price of money, i.e. interest rates, the degree to which this power was actually used varied from country to country and even within individual countries over time. In this context, Galbis concludes "Regarding the application of regulatory power, if any generalization can be made of interest rate policy trends in Latin American countries in the 1967-76 decade this might be the increasing willingness of the authorities to experiment with new forms of policy based both on discretionary actions and indexation on the one hand, and liberalization on the other. One has to hasten to add, however, that this willingness to experiment might have to a large extent been due to the need to cope with new developments like the increasing exposure of some economies to external financial forces and the accelerating rate of inflation during the 1970s" (15, page 4).

The purpose of this section is to analyse the results of policies to liberalize interest rates in the Southern Cone countries: Argentina, Chile and Uruguay. Of course, the experiments in financial repression and subsequent policies aimed at gradual or total liberalization of the interest rates were not limited to these countries. There have also been experiments, though not as drastic or radical, in other countries such as Colombia and Brazil. ^{1/} At all events; owing to the similarities in the exchange, monetary, tariff and financial policies of these three countries, and the availability of statistics, we devoted particular attention to these cases.

In Argentina, Chile and Uruguay the situation prior to liberalization was characterized by the imposition of maximum interest rates (in some cases for either deposits or loans, and in other cases for both) under conditions of increasing inflation rates.

^{1/} For a more extensive analysis see Galbis (17) and Hanson (18).

In Uruguay, financial repression was very intense, rates of interest towards the end of the sixties being subject to a maximum rate of 6 per cent per annum, while the rate of inflation oscillated between 70-90 per cent per annum. This repression was maintained, at a different level of intensity, until November 1977, when the maximum rate was set at 90 per cent per annum. Since the rate of inflation was below this level, this policy in actual fact meant liberalizing the interest rate.

In Chile a dual system was used during the period 1967-1974. On the one hand, maximum interest rates far below the rate of inflation were established for deposits in banking institutions, whilst on the other, an index-linking system was created, whereby positive real interest rates were allowed for savings and loan institutions (SINA^P) and certain instruments of the State and Central Bank of Chile. Of course, this set-up brought about a pattern of growth which differed greatly from one financial institution to the next, according to their access to savings instruments with positive real interest rates. All this strengthened the trend towards the liberalization of interest rates, which was agreed upon in 1975.

Argentina constitutes a similar case to Chile as regards this dualism. On the one hand, the development of certain savings instruments was repressed financially, while on the other, indexed instruments issued by the National Government were created and the liberalization of fixed-term deposits was promoted. In June 1977 interest rates were completely liberalized.

In general, these policies to fix maximum interest rates served a number of aims. In some cases they were based on the hypothesis that low interest rates favoured a high level of investment. In other cases it was held that an increase in interest rates would stimulate a high rate of inflation. It was also presumed that it was necessary to subsidize the development of certain sectors or investments, for example, the farming and housing sectors, through negative real interest rates, in view of the belief that these sectors would not be able to survive with positive real interest rates.

In the light of the actual situation in countries such as Argentina, Chile and Uruguay, where the rate of inflation was increasing annually, all these hypotheses and assumptions led to the conclusion that the negative aspects of financial repression by far outweighed their probable positive effects. In particular, a growing demonetization of the economy was observed, which naturally had an adverse effect on the flow of financial savings and, hence, on the level and quality of investment.

Consequently, the decision to abolish restrictions that impeded the free fixing of the interest rate according to the demand for and supply of loanable funds was aimed at increasing the monetization of the economy (financial deepening). As well as liberalizing the interest rates, the Southern Cone countries tried to create conditions conducive to effective competition in the financial market by eliminating the inflexible elements of the policy for channelling loans and by increasing the freedom of financial institutions for the movement of funds into and out of the countries. ^{1/}

Table 20 shows the changing pattern of the main financial indicators in Argentina, Chile and Uruguay, on the basis of the liberalization of interest rates. The following conclusions may be drawn from this table:

(a) Despite high inflation rates, not only in relation to international standards, but also to "Latin American inflation", it has been possible to achieve positive real interest rates in Chile and to make them appreciably less negative in Argentina and Uruguay;

(b) As a result of the above, a significant increase may be observed in the real monetary balances (measured in terms of M_3) in each of these countries;

(c) The final result of these experiments in the liberalization of interest rates was a growing financial deepening, represented by the index M_2/GDP . ^{2/}

^{1/} In addition to the decision to liberalize the financial market, the Southern Cone countries adopted a policy aimed at "opening" their economies to external competition by means of drastic reductions in import tariffs. Consequently, the real financial opening of these economies should be seen as the adoption of a new economic philosophy, opposed to the old policies of import substitution and regulation of the financial market. In general, we could conclude that in Chile the real opening preceded the financial opening, while Argentina and Uruguay pursued the opposite course.

^{2/} For a conceptual distinction between monetization and financial deepening arising from greater financial intermediation, see Chandavarkar. In this respect, it is suggested that an increase in the M_2/GDP ratio can only reflect a greater deepening of the sectors already monetized, rather than a growing absorption of the non-monetized sector of the economy. However, for the purposes of the present analysis, M_2/GDP is a good indicator, since it represents the flow of loanable funds within the financial system. See McKinnon (21).

Table 20

ARGENTINA, CHILE AND URUGUAY: DEVELOPMENT OF SELECTED INDICATORS
AND THE LIBERALIZATION OF INTEREST RATES

| | Argentina | | | | | | Chile | | | | | | Uruguay | | | | |
|--|-----------|-------|-------|-------|-------|------|-------|-------|------|------|------|------|---------|-------|------|------|-------|
| | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1975 | 1976 | 1977 | 1978 | 1979 |
| Cost of living index ^{1/} | 182.8 | 444.1 | 176.0 | 175.5 | 159.5 | 87.6 | 340.7 | 174.3 | 63.4 | 30.3 | 38.9 | n.a. | 81.5 | 50.7 | 57.3 | 44.5 | 46.0 |
| Real interest rates ^{2/} | -72.4 | -65.1 | -9.2 | -14.1 | -9.5 | -4.5 | -16.9 | 8.6 | 18.7 | 25.0 | 4.8 | n.a. | n.a. | -23.4 | -2.2 | -3.3 | -20.1 |
| Real growth rate of M ₃ ^{3/} | -52.3 | -78.1 | 41.6 | 20.4 | 14.9 | 57.0 | -56.7 | -18.5 | 27.8 | 38.9 | 14.1 | n.a. | n.a. | 39.1 | 13.7 | 23.8 | 8.3 |
| Monetization (M ₂ /GDP) | 13.5 | 8.7 | 12.2 | 17.3 | 19.2 | 24.9 | 8.2 | 10.4 | 14.4 | 16.6 | 18.8 | 20.9 | | | | | |

Source: Chile and Uruguay, see Galbis (17). For Argentina the figures represent our own estimations.

^{1/} For Chile the variation is calculated on an annual December/December basis. For Argentina and Uruguay the figures represent annual averages.

^{2/} Estimated from fixed 30-day deposits. Effective annual rates. Deflator: cost of living index.

^{3/} Annual December/December rate. Deflator: cost of living index. For Argentina annual average.

n.a.: Not available.

In Argentina in the early fifties this coefficient of monetization fluctuated around the 50 per cent mark. From that time onwards the combination of high inflation rates and maximum interest rates had the effect of reducing this figure until it reached 8.7 per cent of the GDP in 1976. With the financial reform approved in June 1977 the coefficient of monetization increased until it reached 24.9 per cent in 1980. A similar process may be observed in Chile, where this coefficient rose from 8.2 per cent in 1975 to 20.9 per cent in 1980.

Table 21 shows that after the liberalization of interest rates this monetization index approached international levels, although Argentina and Chile continued to maintain inflation rates far higher than in those countries. Moreover, this low coefficient of financial deepening should be attributed far more to misguided policies of financial repression than to a lower level of economic development. For example, the financial reforms in Singapore have produced monetization levels similar to or higher than those in developed countries, although that Asian country has a lower level of per capita income.

To sum up, the experiments in liberalizing interest rates in the Southern Cone countries have made it possible to transform the structure and development of their financial markets. In particular, their state of financial repression has been replaced by a far more competitive system, as regards not only the free determination of interest rates but also the elimination of inflexibility in the selection of the lending portfolios of financial institutions and their freedom to move funds into and out of the countries. The final result of this process was a reversal of the trends towards the demonetization of their economies. Thus, although the inflation rate in these countries continues to be very high, even where inflation is decelerating, appreciable increases could be observed in the demand for real money as the result of raising the real interest rate to equilibrium levels. The increase in the real demand for money, resulting from greater financial saving, increased the financial system's real lending capacity.

Table 21

MONETIZATION INDEX: M₂ /GDP IN SELECTED COUNTRIES

| | 1970 | 1975 | 1980 |
|--|-------|------|--------------------|
| LATIN AMERICAN COUNTRIES | | | |
| Argentina | 23.17 | 13.5 | 24.9 |
| Brazil | 20.5 | 16.4 | n.d. |
| Chile | 9.3 | 8.2 | 20.9 |
| Colombia | 23.5 | n.d. | n.d. |
| DEVELOPED COUNTRIES | | | |
| Germany, Fed. Rep. of | 58.3 | 72.7 | 77.7 ^{a/} |
| Belgium | 56.6 | 55.8 | n. . |
| France | 53.8 | 67.5 | n. . |
| Sweden | 60.4 | n. . | n. . |
| UK | 51.0 | 55.8 | n. . |
| USA | 63.6 | 72.6 | n. . |
| ASIAN COUNTRIES WHICH HAVE REFORMED THEIR FINANCIAL SYSTEMS | | | |
| Korea | 32.5 | 32.3 | 33.4 ^{a/} |
| Singapore | 70.1 | 66.8 | 75.0 ^{a/} |

Source: Argentina: own estimation. Chile: Arsenio Molina (22).

The remaining countries: McKinnon (21)

^{a/} Corresponds to 1977.

n.a.: Not available.

Bearing in mind these positive results, it would remain to analyse to what extent the greater real offer of loanable funds made it possible to raise the level of investment and improve the quality of investment, correcting the old trend towards speculative investment, and also to promote greater use of the existing stock of capital. Unfortunately, not only has research not been undertaken into these subjects but also their analysis will not be at all simple since policies to eliminate financial repression have been adopted at the same time as policies of real opening to external competition which, naturally, also affected decisions in regard to private investment. Consequently, analysis of financial liberalization in the countries of the Southern Cone of Latin America does not allow one to draw conclusions on the interdependence of real positive interest rates, real investment and the economic growth rate. We have been able to evaluate only its impact in establishing financial saving and in the increased monetization of their economies (i.e. financial deepening), which as we have seen has been significant.

In spite of the above considerations, we could tentatively conclude that the growing remonetization of the economy has not been matched by a greater demand for investment. This may be the result of very high real positive rates of interest as compared with what is reasonable by international standards and because of an expected future reduction in these rates. Another factor which may also have restricted demand for investment is the lack of a long-term lending market. The development of long-term lending instruments makes it possible to eliminate elements of uncertainty in decision-making on fixed capital investment.

Monetization of the economy and long-term financing

The main characteristic of experiments in the liberalization of interest rates in the Southern Cone countries has been their growing monetization, even in the presence of high inflation rates. However, such increased monetization has not permitted the establishment of a long-term financial market; on the contrary, this market concentrates on short-term operations. Time deposits in particular are, in over 80 per cent of cases, for periods of less than 30 days. ^{1/} It has not been possible to alter this trend towards short-term operations even by indexing methods with real positive

^{1/} In Chile a slight increase in deposits for over one year can be observed. They represented 2 per cent of total interest-bearing deposits in 1976 and 3 per cent in 1978.

rates of over 12 per cent per annum. ^{1/} Of course, there are a number of factors which may push savers towards short-term operations; among them we might mention that past experiences of abrupt changes in the rate of inflation and in the rules governing the financial market tend to favour short-term operations as against inflexible long-term deposits. It is also possible that since these countries simultaneously applied a policy of fixed exchange rates (in the sense that their development over a number of months was fixed in advance), which were in some cases not compatible with the expected inflation rate, persons saving in pesos hoped at some point to obtain a greater rate of return if they made the right decision to transfer their savings in pesos into savings in foreign currency before a major devaluation. ^{2/} That may be the case with Argentina, where the fixed exchange rate policy, which was out of step with the evolution of internal/external prices, gave rise to a continued devaluation of the currency in 1979-1980, as a result of which the Government had to devalue by 52 per cent within two months (February-March 1981). However, whatever the reason, the fact is that financial saving is concentrated in deposits for periods under 30 days. ^{3/} The result is that in order to avoid interest rate and liquidity risks, financial institutions also develop a policy of loans for periods up to 30 days. ^{4/} Accordingly, the only long-term loans are those obtained on the international financial market.

^{1/} In the case of Argentina this return is exempt from income tax.

^{2/} In general this type of policy led to severe imbalances on current account in the balance of payments, which were compensated by the influx of short-term capital attracted by the difference between internal and external interest rates. However, when the internal rate of interest includes the expected rate of devaluation, influenced by the imbalance on current account of the balance of payments, and not the actual rate of devaluation, the influx of external capital tends to slow down and the country starts to lose international reserves, which further stimulates expectations of devaluation.

^{3/} It would be possible to encourage the long-term placement of funds by establishing a secondary market for financial instruments in order to give them greater liquidity. An example is the Euro-bond market.

^{4/} The argument that loans for up to 30 days represent constantly revolving funds is not valid because renewal of the loan depends on the decision of the financial institution.

In this context, there are three options for the creation of a long-term financial market. The first is to a certain extent obvious: to achieve price stability as a way of eliminating financial repression and thereby laying the foundations for a long-term financial market. An interesting example of a country with a certain degree of price stability over the period 1966-1972 is Mexico. Table 22 shows the situation in this country, which operated without financial repression until 1971. It shows that financial penetration was increased in the presence of real positive rates of interest. Naturally, this picture changed with the post-1973 acceleration of inflation. In 1973, real interest rates on deposits being negative, a drop from 34 per cent to 32 per cent can be noted in the index of financial penetration, a process that was accentuated over the following years, as can be seen from the World Bank figures in table 22. In addition, as the real interest rate on loans reached 15 per cent per annum, this suggests that the marginal product of capital might be estimated at some 15 per cent. Therefore, with the acceleration of inflation in 1973, the real rate was reduced to less than 6 per cent, thereby highlighting the two main characteristics of an economy operating under financial repression: (1) rationing of credit by means not directly connected with its price, and (2) subsidies to the sector benefiting from this credit and the encouragement of investments that are not socially desirable by the generation of rates of marginal product of capital of less than 15 per cent.

In view of these characteristics of the Mexican financial market it was possible to develop a capital market operating on longer terms than is usual in other Latin American countries. It will be noted from table 23 that 40 per cent of the total loan portfolio was for periods of over one year.

Table 22

MEXICO: FINANCIAL PENETRATION AND REAL INTEREST RATES

SOURCE: Spellman and Dieli

SOURCE: World Bank

| YEAR | Financial penetration: ratio of private deposits to NNP (%) <u>1/</u> | Real annual interest rates | | Real interest rates for deposits with a high nominal rate interest | Financial penetration: ratio of interest-bearing deposits to NNP <u>4/</u> |
|------|---|----------------------------|-----------------|--|--|
| | | Deposits <u>2/</u> | Loans <u>3/</u> | | |
| 1966 | 23 | 2.02 | 13.09 | - | - |
| 1967 | 26 | 3.15 | 14.70 | - | - |
| 1968 | 26 | 4.24 | 15.03 | - | - |
| 1969 | 29 | 2.97 | 12.80 | 6.2 | - |
| 1970 | 31 | 3.33 | 13.27 | 5.7 | 27 |
| 1971 | 33 | 3.67 | 14.42 | 4.4 | 29 |
| 1972 | 34 | 1.90 | 12.43 | 3.8 | 30 |
| 1973 | 32 | -5.17 | 5.86 | -2.3 | 27 |
| 1974 | - | - | - | -9.9 | 24 |
| 1975 | - | - | - | -2.6 | 25 |
| 1976 | - | - | - | -3.4 | 18 |

Source: Lewis J. Spellman and Robert F. Dieli (31), Tables 1 and 4 for the first three columns; World Bank (32), pp. 74-75 for the last two columns.

1/ Includes all types of savings instruments. NNP is net national product.

2/ This is a weighted average of all deposits and financial intermediaries, including sight deposits with a nominal rate of interest equal to zero.

3/ This is given by the relation between income from interest on loans plus commission divided by total loans. This rate exceeds the regulation ceiling of 12 per cent per annum.

4/ Includes savings and time deposits.

Table 23

MEXICO: PERCENTAGE BREAKDOWN OF TOTAL LOAN PORTFOLIO
BY MATURITY PERIOD, 1960-1973

| MATURITY PERIOD | Percentage of loans of all private financial intermediaries |
|----------------------------|---|
| 30-day loans | 0.14 |
| 90-day loans | 9.19 |
| 180-day loans | 27.01 |
| 360-day loans | 24.21 |
| Loans for over 360 days | 40.68 |

Source: Spellman Lewis J. and Robert F. Dieli,
(31), table 3a.

In Argentina, however, it can be noted that the increase in financial repression, by reducing financial deepening, prompted enterprises to greater self-financing and also led to an increasing share of short-term loans in total external financing. In 1977 "enterprises were self-financing 60 per cent of their activities, suppliers somewhat over 10 per cent and the financial system some 25 per cent". ^{1/} The debit structure by maturity period was as follows: ^{2/}

| PERIOD | Percentage of total debt |
|----------------|-----------------------------|
| Up to 180 days | 73.2 |
| 180-365 days | 5.9 |
| 1-2 years | 5.8 |
| Over 2 years | 15.1 |
| | <u>100.0</u> |

^{1/} Aldabe, Hernán, (1), p. 34.

^{2/} Ibid.

The greater part of the debt for periods over two years originates from loans from outside the country.

The second option for establishing a long-term financial market would be to change savers' habits in order to promote new guidelines encouraging long-term saving. Experience along these lines in Argentina and Chile, even in a context of total freedom of interest rates, has not been satisfactory.

It is of interest to quote as an example the National Development Bank, which is the official institution in Argentina whose purpose basically is to finance the industrial sector in the medium and long term. A breakdown of the Bank's resources is given below: ^{1/}

| ITEM | PERCENTAGE OF TOTAL LIABILITIES | |
|-------------------------------|---------------------------------|-----------|
| | JULY 1974 | JULY 1978 |
| Central Bank | 68 | 2 |
| Deposits | - | 18 |
| Internal obligations | 16 | 11 |
| External obligations | 9 | 41 |
| Capital, reserves and profits | 7 | 28 |
| | 100 | 100 |

With the liberalization of interest rates, the proportion of these sight and interest-bearing deposits increased significantly. However, within the deposit breakdown 43 per cent represent interest-bearing time deposits, further broken down as follows: 55 per cent up to 30 days, 18 per cent for 90 days, 13 per cent for 180 days and the remainder for periods between those indicated. With this attraction structure it is necessary to provide long-term loans of 3-4 years, 80 per cent of which are intended for investment in fixed assets and the remaining 20 per cent for working capital.

^{1/} Aldabe, Hernán, (1), table 20.

The aim of the third option is to change the habits not of savers but of financial institutions and eliminate the restrictions which impede long-term loans in the presence of a structure that attracts short-term deposits. What are the restrictions that impede long-term loans when the body is funded in the short term? There are clearly two. The first is the risk in respect of interest rates resulting from short-term financing for long-term loans. The second is the liquidity risk which the imbalance between attraction and placement implies. ^{1/} Argentina has tried to create conditions to meet each of these restrictions. It therefore seems to us to be extremely useful to outline these mechanisms, which are still at the development stage.

(a) The interest rate risk and long-term loans

Financial institutions would run no interest rate risk if they could index their long-term loans according to the cost of money attracted in the short term, i.e. fix the interest on loans at the same intervals as the interest rate paid to the saver. This in fact has been the essence of the system established in Argentina. It is based on the determination of the effective monthly rate paid by the financial institutions on 30-day deposits, weighted according to each institution's share of the total deposits in the financial system.

To operate this new system, the Central Bank carries out a daily survey among financial institutions in order to ascertain the effective monthly interest rate paid to savers on 30-day deposits and the amounts attracted at these rates. ^{2/} In addition, the sample has been subdivided into three categories of banks, by size. The Central Bank then publishes daily the weighted average of this effective monthly rate, which is known as the "pilot rate". ^{3/}

^{1/} Naturally, a way of avoiding such mismatching between attracting of short-term deposits and granting long-term loans would be to diversify the loan portfolio of the banks making investments in assets with high liquidity and lower profit. However, in the long run this would affect the cost of the long-term loan money.

^{2/} Information is also obtained on 60-day, 90-day and 180-day deposits.

^{3/} This is different from the United States "prime-rate", which is an operative concept fixed by each bank, as a result of what the rate of interest paid to the saver represents and not of what is obtained from first class enterprises. For a detailed analysis of the statistical criteria of the samples see Martha B. de Diegues (9). There is also an index in Mexico which measures the average costs of interest paid on deposits.

On the basis of the effective monthly rate on 30-day deposits (pilot rate) an index is established which increases daily in accordance with the daily rate of interest equivalent to the 30-day pilot rate. Thus, given an initial value of $I_1 = 100$ for the first day, the second day would have the value:

$$I_2 = 100 (1 + i_1)$$

where i_1 is the daily rate equivalent to the effective 30-day monthly rate which the Central Bank published as the first day's pilot rate. The index for the third day would be:

$$I_3 = 100 (1 + i_1) (1 + i_2)$$

where i_2 is the daily rate equivalent to the pilot rate for the second day published by the Central Bank, and so on. For holidays, the pilot rate from the working day immediately preceding is repeated.

As this is a daily growth index it is possible to fix loans and deposits in terms of the future development of the index, relating back to the base two or three days prior to completing the operation. In addition, the index may be used to calculate the present value of debts which do not correspond to complete monthly periods, a method which cannot be used with indices published monthly.

This method of index-linking has proved to be more stable than the method based on the inflation rate, although in the long term the two should converge. This will be seen from table 24, which shows the monthly interest rate obtained from the implicit index of the pilot rate in column 1 and the monthly rate of variation of the wholesale price index in column 2. This table shows that the interest rate index gives a smoother adjustment than the price index, thereby more adequately reflecting the effect which both the expected inflation rate and supply and demand for loanable funds have on the short-term interest rate.

By using this method, financial institutions do not run any time risk with regard to the rate resulting from matching the cost of money borrowed and money lent since the "pilot rate" fixed by the Central Bank represents the realities of the market. When the market is competitive, deviations in the interest rates paid by banks to savers tend to be minor.

Table 24

ARGENTINA: DEVELOPMENT OF THE "PILOT RATE" OF INTEREST AND
WHOLESALE PRICES

| PERIOD | Monthly "pilot rate" of interest for 30-day deposits | Monthly variation of wholesale prices | Real interest rate |
|-------------|--|--|--------------------|
| <u>1980</u> | | | |
| January | 5.77 | 4.3 | 1.41 |
| February | 5.21 | 4.1 | 1.07 |
| March | 4.84 | 3.8 | 1.00 |
| April | 4.49 | 3.9 | 0.56 |
| May | 4.51 | 5.3 | -0.75 |
| June | 5.30 | 7.3 | -1.66 |
| July | 6.02 | 2.9 | 3.03 |
| August | 5.08 | 3.0 | 2.02 |
| September | 4.34 | 2.8 | 1.50 |
| October | 4.29 | 5.5 | 1.15 |
| November | 4.61 | 2.5 | 2.06 |
| December | 5.37 | 0.9 | 4.43 |
| <u>1981</u> | | | |
| January | 5.63 | 2.4 | 3.15 |
| February | 6.49 | 5.1 | 1.32 |
| March | 8.09 | 4.6 | 3.34 |

Source: Miscellaneous publications and circulars of the Central Bank of the Republic
of Argentina.

To a certain extent the pilot rate system of the Central Bank resembles the Euromarket system based on the LIBOR rate, as this market is based on a systematic adjustment of its operations. In 1976, 69 per cent of time deposits on the Euromarket were for less than 180 days, while 98 per cent of loans were for more than three years.

(b) The liquidity risk

The second problem which arises when a bank makes long-term placements with short-term resources is the risk of a contraction in deposits due to a fall in the demand for money as a result of a contraction of the monetary base. In this case its problem is not the interest rate for loans because this interest rate floats according to the cost of attraction (or the pilot rate), as we saw in the preceding section. In a context of illiquidity the bank has to contract its volume of operations, i.e. its loan portfolio, but this is only possible if it concentrates on short-term loans. On the other hand, with a portfolio concentrated on long-term loans, a bank encounters serious problems in balancing the operative level of deposits and loans.

In this respect the Central Bank of the Republic of Argentina has recently established a long-term (four years) rediscounting system related to long-term loans by banks. The interest rate in this rediscounting system is also based on the pilot rate. The Central Bank is attempting by this means to eliminate the liquidity risk.

Chapter III

CONCLUSIONS

A study on the financing of industrial enterprises can be carried out along two lines. One way may be to focus analysis on the description of the different financial policy mechanisms and instruments developed in each country with the aim of assessing whether these experiments have been successful enough to warrant their application in other countries. Without going into the question whether this approach is valid as an analytical strategy, it is obvious that such studies are generally based on the assumption of a capital market in which the financial system perfectly transfers the resources attracted from savers to investors in projects which have an equal rate of marginal return. Such formulas tend to distract attention from the mechanisms which are used for the transfer of financial resources to such matters as savings promotion. Since the acceleration of inflation in the 1970s this approach has lost a great deal of what interest it may have had. Although inflation is not a new factor in Latin America, it is certain that current inflation rates are unprecedented. In this context of increased inflationary pressure it is being more and more clearly recognized that the resulting imperfections of the financial markets are becoming increasingly obvious and indefensible. In most Latin American countries disordered and confused financial systems are emerging as a result of growing and erratic government intervention in these markets.

Monetary authorities assumed that the best way to attenuate the inflationary explosion that occurred after 1973 was through increased intervention and regulation of the financial market by imposing maximum interest rates and controlling the purposes of financial loans. The result of these political decisions was foreseeable: negative real interest rates acted as a disincentive on financial saving and an excess of demand for loans was created. Thus, various systems and methods were successively implemented that aimed at rationing credit along lines different from those prevailing in a system of free competition. In this financially repressive context, the projects for which credit was obtained were not necessarily those bringing high social benefit but those which by tradition, age, size, social and political "connections", etc. came within the "guidelines" for credit rationing. To make progress, projects outside these guidelines

naturally had to be based on self-financing or on access to non-institutionalized financial markets. The resultant range of financial costs according to whether or not subsidized credit had been obtained necessarily led to a low level of investment, a poor apportionment of resources and a lower rate of economic growth.

For these reasons, in undertaking this study on the financing of private enterprises, it seemed to be much more appropriate to start by recognizing present realities in Latin America, emphasizing the state of disorientation and confusion through which the financial systems are passing. Accordingly, in the first part of this study, after presenting the reader with the main aspects of saving, investment, the share of the industrial sector and growth patterns for each Latin American country, an attempt was made on the basis of available empirical studies to answer questions more directly related to the financial structure of the industrial enterprises. What is the share of self-financing in the industrial enterprises of Latin America and how does this relate to existing patterns in more developed countries? What is the weight of short-term vis-à-vis long-term credit financing? How does the size of the enterprise affect access to credit? Unfortunately in view of the lack of statistics that has for many years been characteristic of this field of research, replies to these questions had to be based on only a small number of empirical studies. In any event, the replies to the questions were those to be expected in highly fragmented and repressed financial markets.

In Latin American countries the share of self-financing tends to be fairly close to that observed in the developed countries. On the one hand, the existence of negative real interest rates encourages bank indebtedness for the purpose of obtaining the subsidy which these rates imply and on the other hand the disincentive to financial saving which it generates finally causes the real offer of credit from the financial system to contract (the other side of the coin with regard to interest deposits) and necessarily leads to greater self-financing by enterprises. It is very likely that these two opposing forces neutralize one another and that the final result is a self-financing/financial debts relationship that is comparable to that found in countries with more sophisticated financial markets. However, the above relationship is not unconnected to the size of the enterprises, since, as was to be expected, large enterprises have greater access to bank credit than small enterprises, which obliges the latter to rely to a greater extent

on self-financing. Naturally, this difference in access in a context of subsidization resulting from the presence of negative real interest rates has considerable influence on the distribution of income.

Although Latin American countries are comparable to other free enterprise countries as far as the proportion of financing by banks is concerned, the same does not apply to the long-term financial market. In fact, a disproportionate share of short-term financing can be observed in the Latin American countries. It must once more be pointed out that high and fluctuating inflation rates and the consequent financial repression fundamentally encourage the trend towards short-term financing.

These considerations as a whole finally led to a study of the intensity of financial repression in Latin America. The presence of negative real interest rates was used as an indicator for this purpose. Fortunately, the work of Galbis (15) made it possible to quantify this phenomenon and observe how it progressed over time with the acceleration of the inflation rate. Naturally, as financial repression grew there was further reduction in the size of the financial market, measured by the ratio M_2/GDP , and the level and composition of investment were further affected.

This process led the countries whose internal and external balances were most affected to experiment with different methods in order to escape the effects of financial repression. Thus in the initial stage various instruments for index-linking or partial liberalization of interest rates were introduced which merely contributed to facilitating greater relative growth of the instruments and of the financial bodies which were able to benefit from the advantages represented by the greater freedom to fix interest rates. Within a few years, this unsatisfactory state of disorientation led the countries in the Southern Cone of Latin America (Argentina, Chile and Uruguay), i.e. those with the greatest tradition of inflation, to undertake ambitious reforms of their financial systems, introducing total freedom to determine interest rates for the purpose. The reaction in these countries was also foreseeable: although their inflation rates were higher than in the rest of Latin America, real interest rates for savers were more positive, thereby making possible growing financial deepening.

However, what also emerges from the analysis of these countries is that the existence of positive real interest rates is a necessary condition, although not sufficient in itself, for the creation of a long-term financial

market. The experience of Argentina serves as an example in this respect, as it draws attention to the fact that high and fluctuating rates of inflation continue to have much more effect on the short-term expectations of the saver than does the existence of positive real interest rates. For this reason there is probably no other alternative in these countries than to accept the reality of the tendency towards short-term investment by savers (at least until price stability is achieved) and to promote appropriate financial instruments that enable financial institutions with short-term deposits to finance long-term loans. In order to overcome the natural resistance of banking institutions, it would be necessary to cover two types of risk arising when long-term loans are financed with short-term resources: those related to the interest rate and to liquidity, respectively. Accordingly, the final section of the paper outlined the method which is being attempted in Argentina to facilitate the development of a long-term loan market in spite of high inflation rates. It is still too early to assess the results achieved with this system but everything seems to suggest that a good beginning has been made. This paper concludes with the description of the Argentine system based on the elaboration, on the basis of daily surveys carried out by the Central Bank, of interest rates paid by financial institutions on 30-day deposits. The Central Bank publishes daily the effective monthly rate of interest, known as the "pilot rate", which is the average of the rates revealed by the surveys, weighted by the deposit amounts received daily by each bank at this rate. The pilot rate can be used by the banks to fix the base for indexing their loans (plus an additional spread), thereby eliminating the interest rate risk. In turn, in order to offset the liquidity risk, the Central Bank periodically sells rediscounted bills to financial institutions on a long-term basis at interest rates which are also readjusted in line with the pilot rate.

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