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Financial Liberalization and Stability in Developing Countries

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Abstract

This paper discusses the recent experience with financial innovation and liberalization in developing countries. It is argued that successful adaptations to innovation and liberalization in industrial countries provide poor guidelines for a successful transition from the financially repressed systems often encountered in many developing countries. The analysis suggests that financial institutions in a developing country must be structured to operate in an inherently more difficult environment. Finally, the paper outlines the types of regulatory and supervisory policies that can help achieve such a structure.

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Summary

The forces behind financial innovation and liberalization in developing countries have, in many respects, been similar to those familiar to observers of financial markets in industrial countries. In both developing and industrial countries, the authorities' ability to tax financial intermediation and to control resource allocation has declined in the face of competition from international and unregulated domestic providers of financial services. However, financial liberalization in many developing countries has not been a successful transition to more efficient financial markets capable of supporting growth. Three explanations are proposed in this paper.

First, because the real economies of developing countries are highly specialized, diversification within domestic financial systems is limited and diversification through the intermediation of foreign assets is restricted or distorted by exchange and capital controls. In this environment, financial institutions modeled after those in industrial countries may be unable to withstand the financial shocks typical to a developing country.

Second, in developing countries taxes on financial intermediation have been a much more important source of government revenue than in industrial countries. Financial repression has led both to an erosion of this tax base and to an associated increase in the inflation tax rate that have had important destabilizing effects on the financial system.

Third, the highly regulated financial system in developing countries that existed before liberalization provided little incentive for the development of supportive institutional arrangements common to private credit markets in industrial countries. For example, supervision and regulation largely addressed adherence to the government's guidelines for credit allocation, rather than the more complex (and more urgent) question of the prudence of credit decisions of insured financial intermediaries.

The lessons of this experience are fourfold. First, any successful liberalization program almost certainly requires resolution of the fiscal problem. Second, if financial intermediaries cannot acquire foreign assets, their liability structure will reflect the instability of domestic asset values. It may be necessary, for example, to limit the share of par-value liabilities in total liabilities. Third, financial institutions must be permitted, and perhaps required, to cover their foreign currency position. Fourth, in a newly liberalized system, prudential supervision and regulation may have to be given a higher priority than previously.

I. Financial Repression and Liberalization

Many developing countries implemented policies during the 1970s and 1980s designed to increase the role of market forces in the determination of interest rates, the allocation of credit, and the overall scale of financial intermediation. These financial reforms have been motivated both by a desire to improve the efficiency and stability of the financial system and by internal and external macroeconomic developments which made it increasingly difficult to maintain a tightly regulated financial system. Although national financial systems have encompassed diverse sets of regulations, markets, and institutional arrangements, it is possible to find similarities both in the motives for liberalization and the results of these efforts.

To identify the factors that have stimulated reforms in developing countries, this section first examines the types of rules and regulations that have typically been used to influence or control financial intermediation decisions in a repressed financial system. Consideration is also given to how these rules and regulations interact with the macroeconomic characteristics of developing countries--characteristics which differ in important respects from those of industrial countries--to determine the structure, efficiency, and stability of domestic financial systems.

1. The characteristics of financial repression

While the administrative rules and regulations that have been a part of repressed financial systems have naturally differed across countries, there are certain elements which have been a part of many regulatory structures. To simplify, these rules and regulations can be divided into those which (1) constrain the levels of interest rates; (2) restrict the portfolio selection of both financial and nonfinancial institutions; (3) impose taxes or require purchases of government securities; (4) limit access to external financial markets; and (5) limit entry and competition in the domestic financial system.

a. Interest rates

Interest rate ceilings on lending and deposit rates are a part of the financial structures of almost all developing countries. Such ceilings are often justified on the grounds that high interest rates would discourage investment and that freely determined interest rates would be distorted by the oligopolistic nature of the domestic financial system. These ceiling rates have in some countries resulted in highly negative real interest rates (Table 1), especially in those countries with rapid inflation, and a wide spread between loan and deposit rates. Such rates tend to be adjusted slowly to changing economic conditions and inflation and may provide little incentive to accumulate domestic financial instruments. Low or negative real rates of return on domestic financial assets have contributed to growth in real holdings of domestic

Table 1. Average Ex Post Real Interest Rates, 1970-80 and 1980-82 1/

(In percent per annum)

	1970-80			1980-82		
	Term deposit	General credit	Preferential credit	Term deposit	General credit	Perferential credit
Pakistan	-0.8	1.4	0.7	5.4	6.2	6.3
Morocco 2/	-2.9	1.7	-2.7	2.6	6.2	1.5
Korea	-5.8	-2.6	-10.8	5.8	7.8	6.8
Thailand	-5.9	1.2	-5.8	6.1	12.8	2.3
Bangladesh 3/	-7.7	-3.3	-5.2	6.8	9.6	5.6
Kenya	-7.9	-2.4	-5.6	-0.5	2.0	-0.6
Uruguay	-15.3	11.2	--	15.6	23.9	--
Turkey 4/	-23.0	-22.0	-23.1	17.9	29.6	-6.5
Nigeria	-17.6	-12.9	-8.4	-10.2	-5.6	-7.0
Peru	-18.1	-9.4	-21.8	-21.7	-7.2	-39.6
United States	-1.6	0.8	--	4.6	7.9	--

Source: Hanson and Neal (1985).

1/ The average real interest rate is:

$$\text{Antilog}\ ([\Sigma(\log(1+r_t) - \log(1+p_t))]/n) - 1$$

where r_t = nominal rate of interest at end of year t;

p_t = annualized inflation rate from end of year t to following June; and

n = number of years.

2/ All Moroccan series begin in 1974.
3/ All Bangladesh series begin in 1971.
4/ All Turkish series begin in 1974.

financial assets that are much lower than those experienced in countries with positive real rates of return (Table 2). As a result, the total flow of resources to the regulated financial system may have been suppressed.

Data on average lending and deposit rates for both developed and developing countries have been included in Table 3. The developed countries had lending-deposit rate spreads that were often more than twice as large as that observed in the major industrial countries. Moreover, those developing countries identified by Hanson and Neal (1985) as having the most negative real deposit rate (see Table 1) also tended to have the largest spreads.

b. Portfolio selection

In these repressed systems, portfolio selection restrictions are the principal means of allocating the resources that flow through the organized financial sector. These directed credit programs often involve requirements that financial institutions devote a certain portion of lending to specific activities, central bank rediscounting of credits to key sectors often at subsidized rates, and the control of financial intermediaries through direct ownership. Table 4 illustrates the types of selective credit policies that were evident in a number of Asian countries in the late 1970s. It has been argued 1/ that these rationing schemes are unlikely to match available resources with the most productive sets of investments. Instead, resources flow to the financing of government deficits or capital intensive projects undertaken by large firms (often parastatals) whose domestic markets are protected by trade restrictions. This distribution of credit often forces small and medium-sized enterprises to seek out credit from the unorganized financial markets or leads to much greater reliance on self-finance since these firms are unlikely to be able to access international financial markets. For such firms, the true "opportunity costs" (shadow price) of obtaining credit is far in excess of published loan interest rates. Moreover, in such a market, bank managers and loan officers face such a large excess demand for credit that they seldom have much experience in marketing their product or in selecting among competing projects on the basis of rates of return.

c. Taxes and reserve requirements

The portfolio choices of financial institutions are also influenced by the existence of high liquidity and required reserve ratios and the complex mix of explicit and implicit taxes and subsidies which the fiscal authorities impose on the financial system. Direct taxes on interest income, bank profits, and financial transactions in some cases represent important sources of tax revenues. Moreover, high required reserve

1/ See Hanson and Neal (1985).

Table 2. Selected Developing Countries:
Growth of Real Financial Assets 1/ and Real GDP
by Groups Distinguished by Interest Rate Policy, 1971-80

(In percent per annum)

	Financial Assets	GDP
A. Countries with positive real interest rates		
Malaysia	14.5	8.1
Korea	12.6	8.1
Sri Lanka	11.9	5.3
Nepal	10.0	2.4
Singapore	8.5	8.8
Philippines	6.3	6.3
B. Countries with moderately negative real interest rates		
Pakistan 2/	6.5	3.9
Thailand	8.3	7.2
Morocco	8.4	5.5
Colombia	6.5	5.5
Greece	5.2	4.4
South Africa	5.3	3.2
Kenya	4.1	5.9
Burma	3.9	4.4
Portugal	2.2	4.5
Zambia	0.6	1.4
C. Countries with severely negative real interest rates		
Peru	5.3	3.3
Turkey	2.3	4.7
Jamaica	-3.5	-1.2
Zaire	-7.8	-0.2
Ghana	-5.1	0.5
D. Industrial countries		
Germany	3.5	2.7
Japan	3.6	5.1
United States	0.9	2.4

Sources: Lanyi and Saracoglu (1983) and International Monetary Fund, International Financial Statistics, various issues.

1/ Measured as the sum of monetary and quasi-monetary deposits with the banking sector, corrected for changes in the consumer price index. The results differ from Lanyi and Saracoglu to some extent due to data revision.

2/ 1974-80.

Table 3. Nominal Lending and Deposit Interest Rates, 1970-80 and 1980-82

(In percent per annum)

	1970-80			1980-82		
	Term deposit	General credits	Preferential credits	Term deposit	General credits	Preferential credits
Pakistan	8.1	10.5	9.6	10.1	11.3	11.0
Morocco 1/	5.3	10.3	5.5	7.8	11.7	6.3
Korea	14.3	18.2	8.2	13.0	15.7	13.3
Thailand	6.9	14.9	7.0	10.7	18.0	7.0
Bangladesh 2/	7.0	12.1	9.9	13.0	16.0	12.0
Kenya	5.1	10.3	8.3	10.3	13.7	11.0
Uruguay	31.6	68.6	--	54.6	67.1	--
Turkey 3/	10.1	11.5	9.0	44.0	52.0	17.2
Nigeria	3.8	9.7	9.2	6.8	12.3	10.5
Peru	14.7	27.2	9.3	55.2	82.9	26.3
United States 4/	8.7	10.1	--	13.8	16.3	--
Japan	4.2	7.7	--	4.6	7.8	--

Sources: Hanson and Neal (1985); and International Monetary Fund, International Financial Statistics, various issues.

1/ All Moroccan series begin in 1974.
2/ All Bangladesh series begin in 1971.
3/ All Turkish series begin in 1974.
4/ For the United States, this is the period 1976-80.

Table 4. Credit Policies in Selected Asian Developing Economies

Country	Subsidized Loan Rates for Priority Sectors	Preferential Rediscount Rates	Budgetary Subsidies	Credit Floors 1/	Credit Ceilings 2/
Bangladesh	yes	yes		yes	yes
Burma	yes			yes	yes
India	yes	yes			yes
Indonesia	yes	yes	yes	yes	yes
Korea	yes	yes		yes	yes
Malaysia	yes	yes		yes	
Nepal	yes	yes		yes	yes
Pakistan	yes	yes	yes	yes	yes
Philippines	yes	yes			
Singapore					
Sri Lanka	yes	yes	yes		yes
Thailand	yes	yes		yes	

Source: Fry (1986).

1/ Minimum proportion of deposits that must be lent to specific priority borrowers.
2/ Maximum proportion of deposits that could be lent to certain borrowers or for certain activities.

ratios ensure a ready demand for government securities or high-powered money that can help finance the government deficit at given ceiling interest rates. Table 5 provides information on required reserve and liquidity ratios in selected Asian countries in the late 1970s. As has been examined by McKinnon and Mathieson (1981), this creates scope for significant inflation tax revenue. At the same time, the authorities subsidize financial transactions by providing implicit subsidies in the form of deposit insurance and lender of last resort facilities. This mix of taxes and subsidies has conflicting effects on the scale of financial intermediation, the direction of credit, and the importance of the financial system as a source of tax revenues. For example, while deposit insurance and lender of last resort facilities presumably stimulate holdings of domestic financial assets by reducing the risk of bank runs, low ceiling interest rates (and negative real rates of return), and taxes on financial transactions discourage the accumulation of domestic instruments. While the allocation of credit is most directly influenced by portfolio selection rules, the transfer of resources associated with these rules involves the use of self-contained tax-subsidy schemes which are not recorded in the usual fiscal accounts. For example, a rule which leads banks to allocate deposits (carrying below market interest rates) to priority lenders at special subsidized rates involves an implicit tax on depositors which is paid as a subsidy to the borrower.

Given the complex mix of taxes and subsidies, the financial system often represents an important and relatively elastic source of tax revenues for many developing countries. When this is the case, it may be necessary to carefully examine the effects of financial deregulations on tax revenues during the reform process. Fischer (1982), for example, found that the inflation tax by itself is often quite large relative to GNP even without considering the potential revenues arising from other direct taxes on the financial system. Table 6 illustrates the relative importance of the issuance of base money relative to GNP and total tax collections in alternative country groups. Fischer notes that:

> The rate of high-powered money creation relative to GNP is typically greater for LDCs than for higher-income countries, and in some cases is even above 5 percent on average over more than a decade. Correspondingly, there are governments for which seigniorage constitutes over 10 percent of total revenue on average. Seigniorage is thus not a minor factor for these governments. 1/

d. Access to external financial markets

The above regulations and taxes have created strong incentives for domestic bank and nonbank institutions to conduct their financial operations in external or informal (and unregulated) domestic markets. Depositors are attracted to these alternative markets by higher yields,

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1/ Fischer (1982), p. 301.

Table 5. Reserve and Liquidity Requirements
in Selected Asian Developing Economies

Country	Reserve Requirements in the late 1970s: Sight Deposits	Reserve Requirements in the late 1970s: Time Deposits	Additional Required Liquidity Ratio
Bangladesh	5	5	5
India	6	6	34
Indonesia	15	2.5-10 1/	--
Korea	14	10	--
Malaysia	10	10	10
Nepal	7	7	--
Pakistan	5	5	35
Philippines	20	20	--
Singapore	6	6	20
Sri Lanka	12	5	--
Thailand	7	7	-- 2/

Source: Fry (1986).

1/ The ratios are 2.5 percent for local and private development banks and savings banks, 5 percent for foreign banks, and 10 percent for state-owned commercial banks.
2/ A 12 percent liquidity ratio is imposed on commercial banks that open new branches.

Table 6. Seigniorage Rates for Selected Countries and Regions, 1960-73 and 1973-78

(In percent)

	Issuance of High-Powered Money Relative to GNP		Issuance of High-Powered Money Relative to Sum of Tax Revenues plus Issuance of High-Powered Money	
	1960-73	1973-78	1960-73	1973-78
Industrial countries	1.0	1.1	6.1	5.9
Other European countries	1.9	2.3	8.3	10.4
Oil exporting countries	2.1		8.9	
Other Western Hemisphere countries	2.2		13.3	
Other Middle Eastern countries	3.8		13.0	
Other Asian countries	1.4		9.5	
Other African countries	1.3		7.0	

Source: Fischer (1982).

and borrowers find that they can obtain the credits they desire (even if at nonsubsidized interest rates) which they cannot obtain in the domestic market because of credit rationing. Moreover, such financial transactions allow these institutions to escape the taxes imposed on financial market transactions in the organized sector. To prevent an erosion of this tax base, the authorities in an economy with a repressed financial system have traditionally placed extensive controls on both inflows and outflows of capital and have made contracts in the unorganized sector legally unenforceable.

e. Concentration and entry

The other major set of regulations affecting the structure of a repressed financial system are those relating to entry, the degree of competition, and concentration of ownership. Entry is generally quite restricted, and the rights are typically granted to certain groups rather than auctioned to the highest bidder. This limited entry plus restrictions on foreign ownership of domestic financial institutions have often resulted in an oligopolistic structure for the regulated banking industry. The degree of concentration in the banking system of certain Asian developing countries in 1977 is illustrated in Table 7. While single banks held as much as one-third of all deposits, the largest four banks accounted for as much as three-quarters of all deposits. In addition, ownership of the financial institutions has been linked in some countries to large industrial group holding companies. As a result, many banks have as their principal customers companies that are also owned or controlled by the same holding company. Moreover, since each bank's share of the domestic market can only be increased through relatively costly nonprice competition (e.g., extensive branching), the individual banking units often have high operating costs.

II. The Implications of Financial Repression

In Section I it was argued that a repressed financial system allows the authorities to exercise control over resource allocation and to tax financial intermediation. While these are often seen as desirable attributes by the authorities, the costs that such a system imposes on the private sector may be less obvious but substantial. In this section, the nature of such costs, and the likely response of market participants attempting to minimize them, are outlined.

1. Limits on diversification

Developing economies generally offer domestic residents relatively little opportunity to achieve a diversified portfolio. In part, this reflects the fact that, in those economies which rely heavily on the export of only a few goods or whose exports are sent to only a limited number of markets, economic activity in all sectors will be influenced by changes in either the price or volume of exports. Given the controls

Table 7. Concentration in Banking: Selected Asian Countries, 1977

	Percentage of Deposits Issued by		
	Largest bank	Four largest banks	Ten largest banks
Indonesia	27	73	87
Malaysia	20	50	57
Philippines	23	40	64
Singapore	8	21	27
Thailand	33	65	89

Source: Viksnins (1980).

which limit access to foreign assets or credits, portfolio diversification for both financial and nonfinancial institutions may therefore be quite limited. Thus, in addition to the desire to obtain higher returns on financial assets or more favorable sources of credits, domestic portfolio owners may also seek access to foreign financial markets in order to diversify risks. 1/

2. Asset services

Asset services consist of gathering information to evaluate a loan (to limit adverse selection) and to monitor the borrowers after the loan is made (to limit moral hazard). Existing rules and restrictions on portfolio selection often remove or limit incentives to give loans to profitable projects, to deny loans to unprofitable projects, and to perform the optimal level of monitoring. This process is also affected by the presence of any implicit or explicit deposit insurance which tends to make depositors less concerned about the quality of the loan portfolios held by financial institutions. As has been discussed extensively in the literature on financial regulation in industrial countries, 2/ such insurance creates a potential moral hazard situation in which bank managers may be inclined to make loans that have a high expected yield but are also subject to considerable risk. However, in developing countries with repressed financial systems, the impact of deposit insurance on risky loan strategies is limited by restrictions on portfolio selection.

3. Liability services

Liability services involve the clearing of transactions and the holding of currency inventories. While these services clearly continue to be performed in a repressed financial system, the scale of these services would be affected to the degree that the inefficiencies and taxation in the system would reduce overall financial flows through the organized sector. For example, residents might hold foreign currencies in order to make transactions.

4. Transformation services

The transformation services of the financial system are perhaps most adversely affected by financial repression. These services are associated with converting illiquid instruments into liquid instruments which involve matching the demands of both borrowers and creditors. The restrictions on portfolio selection and interest rate ceilings prevent financial institutions from matching these demands and pooling risks and, therefore, from providing a full set of transformation services.

1/ In this situation, holding the assets of the domestic unorganized sector would not help achieve greater portfolio diversification.

2/ For example, see Benston, et al. (1986).

5. Stability

Financial repression also affects the stability of the financial system. In a severely repressed financial system, which is subject to significant taxes, it has been noted that financial institutions will generally not be able to fulfill their basic financial intermediary functions and achieve a diversified portfolio. As a result, the level and composition of domestic investment and the scale of domestic financial savings will be adversely affected. In this situation, the stability of such a system is weakened by (1) the fact that banks' assets often represent claims on sectors of the economy whose performances are highly correlated (i.e., little portfolio diversification); and (2) the attempts of depositors and borrowers to escape to the unorganized financial sector or external markets. Moreover, the attempts to flee the organized section will intensify during such periods as those associated with exchange market crises. In addition to affecting stability, the attempts to escape financial system taxes, increase portfolio diversification (by holding foreign assets), and ease credit rationing restrictions may also mean that the short-run revenue elasticity associated with taxing financial activities may be considerably higher in the short run than in the long run.

III. Financial Reforms

The financial reforms undertaken in developing countries in Asia and Latin America during the past two decades have differed considerably with regard to the types of reform measures enacted, the speed of the liberalization, and the degree of coordination of the liberalization policies with other policy measures. The outcomes of these reforms have also varied with some reforms being sustained over an extended period with relative stability (e.g., Korea) but with others ending in the midst of a financial crises (e.g., Argentina and Chile). This experience has raised a number of basic questions. First, what considerations motivated the authorities to undertake financial liberalization? Second, were the difficulties encountered in some of the reforms attributed to the initial concept of the reform, the kinds of macroeconomic and supervisory policies that accompanied the reforms, the structure of the financial system, or external factors? Finally, what measures could be taken to ensure greater efficiency and stability of future reforms?

Much of the recent literature on financial reforms that experienced difficulties has focused on the second of these questions and has given particular attention to the interaction between liberalizations in the goods (e.g., tariff reductions) and financial markets. It has generally been argued that "... policy inconsistencies were the main reason for the eventual failure of the reforms." 1/ Such inconsistencies were

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1/ See Corbo and de Melo (1985), p. 864.

principally associated with the fact that goods and financial markets adjust at different speeds, and that the real exchange rate appreciation often generated by a financial reform made the integration of domestic and foreign goods markets much more difficult. 1/ However, less attention has been devoted to the factors motivating these reforms and what measures could be taken (other than better coordination of macroeconomic policies) to ensure a more efficient and stable financial system. Our objectives in this section and the next are, therefore, to compare the motivations for undertaking financial reform in both developed and developing countries and then to consider how different characteristics of developed and developing countries would suggest the need in some cases for quite different reform strategies.

1. Motivation for undertaking financial reform

The reasons for reform of financial systems in developing countries are quite familiar to observers of financial deregulation in industrial countries. An important one is that efforts to tax financial positions have led to the use of alternative forms of domestic and offshore financial intermediation. There has been in some cases an explosion of holdings of gross claims on, and liabilities to, nonresidents by residents of many developing countries. This phenomenon, which is sometimes referred to as capital flight, has also been seen in industrial countries where increased use of offshore credit markets in the face of controls on domestic transactions has created competitive pressures that have led to liberalization of domestic markets. 2/ In part, the weakened financial positions have reflected the effects of the long decline in commodity prices, the slowdown in economic activity, high interest rates, and the associated debt-service problems that were experienced by many developing countries in the late 1970s and early 1980s. The actual or anticipated higher taxation of regulated financial intermediation has had the expected effect of encouraging the use of offshore and so-called domestic curb markets for credit.

1/ The discussions of the macroeconomic policy coordination issues have led to the conclusions that: (1) fiscal imbalances should be dealt with relatively early in the reform period since it is difficult to offset the adverse effects of the financing of large scale deficits; (2) trade reforms (e.g., tariff reductions) should take place early in the reform period, but there is considerable debate over whether these changes in trade policy should occur quickly or be phased in gradually over time; and (3) extensive financial reforms should be delayed until inflation is under control and capital controls should be used to insulate the domestic financial system during the transition.

2/ See Dooley (1986) for a discussion of capital flight and financial intermediation.

Another impetus to liberalization of financial markets which has also been evident in industrial countries is a political decision to reduce the government's role in directing resource allocation. In some cases, this regime change reflects the presumption that many economic activities would be better directed by market forces. As discussed earlier, the measures used to allocate resources through the financial system (e.g., portfolio allocation rules, high-required reserve ratios) can lead to an inefficient financial system characterized by high operating costs, credit rationing, and depressed levels of domestic savings and investment. As a result, repressed financial systems have been unable to provide credits to domestic producers under terms and conditions comparable to those that their foreign competitors could obtain from abroad. One objective of the reforms, therefore, has been to increase the efficiency of the system by reducing the scale of intervention in the financial markets.

Finally, many other developing countries found that their repressed financial systems were also unable to cope with the sharp change in economic conditions associated with the debt crisis. The widespread failure or nationalization of industrial and commercial enterprises, the dramatic real depreciations of domestic currencies, and sharp increases in inflation during this period created instability in the financial structures (regardless of the degree of repression) of all developing countries. The resulting government support and in some cases nationalization of financial intermediaries underlined the question of where do we go from here.

2. Financial reforms and institutional structure

To liberalize domestic financial systems, the authorities in developing countries enacted a broad spectrum of regulatory changes including lowering required reserve ratios, removing ceiling interest rates on certain classes of deposits, allowing for freer entry into the financial system, eliminating portfolio allocation rules, and relaxation of controls on external financial transactions. Since it has been argued that some of these new policies contributed to the financial market instability, this section focuses on the types of changes in regulations and institutions that would most enhance the stability and efficiency of the financial system. The types of institutional changes that will be an appropriate part of any financial reform will be affected by what residual role the authorities want to retain in the decision-making process of the financial system regarding resource allocation, the portion of financial intermediation services that the authorities are willing to allow to be generated from foreign sources, and the ability of the authorities to find alternative revenue sources to replace taxation of the financial system. As has been noted, financial liberalization necessarily shifts the focus of economic decision-making away from the government toward the private sector. Although such a relocation of decision-making was an explicit objective of some reforms, there has been little useful discussion of the conditions under which such a change in the focus of decision-making will in fact yield the benefits usually associated with market-oriented financial arrangements. In particular, is it likely that the types of institutions and informational sources that are vital to the appropriate evaluation of risks and returns in a market environment will emerge without official actions? Since the absence of appropriate sources of information and institutional arrangements might contribute to the instability of the financial system (e.g., by increasing the scope for fraud or undertaking risky investments), the authorities may have to accompany the elimination of various restrictions on private portfolio choices with a strengthening of prudential supervision and regulation.

An important factor influencing the types of reforms undertaken is the willingness of the authorities to allow foreign institutions and markets to generate the financial intermediary services that are needed by the economy. Purely on efficiency grounds, it is possible that a country might find that comparative advantage implies that all financial intermediary services should be imported. However, most countries have restricted the access of foreign financial institutions to the domestic markets both to maintain the implicit tax base associated with the domestic financial system and because of concerns about allowing the domestic banking industry to be controlled by external owners. In addition, recent analyses of the financial reforms in the Southern Cone of Latin America have argued that the full integration of domestic and external financial markets may have to be delayed until inflation is under control and the domestic financial system has been made more competitive.

In considering the types of institutional changes that should be a part of a financial reform, it has often been suggested that the reforms undertaken in the industrial countries can provide useful guidelines for the steps to be taken in developing countries. An important difference in the experiences of industrial and developing countries, however, is that in the case of industrial countries taxation of the financial system is not an important source of fiscal revenues. Thus, the erosion of the financial system as a tax base has been inconvenient but not a significant cause of fiscal problems in industrial countries. In contrast, taxes on financial intermediation have been relatively more important in developing countries. In addition, there is in some cases a strong political commitment to tax relatively wealthy members of these societies. For both these reasons, deregulation of financial markets is often a more difficult problem for governments of developing countries.

Moreover, the institutional arrangements that surround market-oriented financial markets in industrial countries would not develop in the "typical" pre-reform financial system described in Section II. For example, in a system in which domestic credit was channeled through the banks, there would usually be only a small traded equity market. Thus, private credit rating systems, public regulatory bodies, such as the Securities and Exchange Commission in the United States, and standardized accounting standards and practices would not be well established. Since regulations severely limited the investment choices of the managers of financial institutions, there was no obvious reason to separate the ownership of financial institutions from the industrial firms to which the bank lent. For similar reasons, a competitive structure of the banking system was also not an important policy objective. Finally, the role of bank regulation and examination in insured intermediaries was also dissimilar to that which has evolved in industrial countries. In a pre-reform system, regulators sought to ensure that the banks are not engaged in fraud, and that they conform to the government's guidelines on credit expansion.

Given these structural differences between developed and developing countries, liberalization of a banking system in a developing country can expose the system to several potential trouble spots. Three general areas appear to have the potential for creating the greatest problems.

a. Prudential risks

One of the traditional goals of supervision of bank portfolios in industrial countries has been to ensure that the bank's assets do not become too concentrated in a single firm or subject to a common source of risk. This objective will be difficult to achieve in the case of a newly opened banking system in a developing country because of the problems of joint ownership. In addition, all of the bank's potential customers within such countries may be equally affected by shocks to commodity prices or crop conditions. Moreover, national income for such countries may display a higher variance than that in industrial countries for a host of economic and political factors. Thus, it may be impossible for banks to acquire a diversified asset portfolio if they are limited to domestic credits. Since most financial liberalizations have not been accompanied by a removal of restrictions on residents' holdings of foreign assets, this inability to diversify portfolio risks will be an element common to most reform programs. It is ironic, for example, that although such diversification may be necessary in order to support a banking system that resembles those in industrial countries, the acquisition of foreign assets would be considered capital flight in many quarters and be interpreted as a weakening rather than a needed strengthening of the financial structure of banks in developing countries.

b. Concentration of ownership

Another factor influencing portfolio selection in a newly liberalized system is that initially there will be substantial joint ownership of financial, industrial, and commercial firms. Such holding companies or groups may be ill-equipped to adjust quickly to a market-determined cost of credit--particularly if they have for a long time received favorable treatment under the previous regime. In such cases, banks initially may be obliged to extend credit to firms that are not viable in the short run in order to protect the capital of the bank over time. This is not the type of credit allocation that many have in mind when they argue that market forces are necessarily more efficient at allocating credit.

c. Deposit insurance and moral hazard

A familiar problem in industrial countries that may be even more serious in a newly liberalized system in developing countries is the moral hazard generated by insurance of bank liabilities. The moral hazard issue arises if deposit insurance (whether explicit or implicit) induces bank managers to make risky loans at high real interest rates under the assumption that, with favorable outcomes, they will obtain high profits for shareholders; but that, with unfavorable outcomes, the large losses would be absorbed by the government in order to avoid a collapse of the bank or banking system. It may not be credible for a government that has historically been deeply involved with credit allocation to limit its commitment at the beginning of a reform period to maintain the solvency of both the banks and their commercial debtors. The political pressure to rescue both financial intermediaries and their customers that become insolvent may be impossible to resist as has been illustrated in the recent experiences of a number of Latin American countries (e.g., Argentina and Chile).

3. Prudential supervision and regulation

As a result of these problems, the role of supervision and regulation of financial intermediaries becomes much more important as a financial reform is undertaken. In a way, this is surprising since liberalization is often associated with a reduction in such activities. In fact we would argue that the opposite is the case. Many aspects of supervision and regulation can be summarized under the notion of agency problems. The central insight of such theory is that competitive markets do not work well unless decision makers' agents are induced to act in the interests of the principals (i.e., the households) in the system. In industrial countries, a complex institutional framework has evolved to insure that financial intermediaries act in the interests of the owners and depositors of the banks and that they do not exploit insurance in order to acquire high risk asset portfolios. In a newly liberalized system, we should not assume that such a framework exists or will develop rapidly. At a minimum, it will take time, and perhaps painful experience, to show how such institutions must be structured in developing countries.

This raises the question of what type of system of supervision and regulation would make the greatest contribution to ensuring a more stable financial system during a reform period. 1/ Clearly the establishment

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1/ The instability problems that have been encountered in earlier reforms have led to a number of policy proposals. For example, McKinnon (1986) and Harberger (1985) have argued that the high real interest rates and modification of such a system would have to be adjusted over time as the reform progresses, inflation was reduced, restrictions on capital account transactions were relaxed, and the institutional structure changed. Nonetheless, certain features of an appropriate supervisory structure could be expected to be sustained over the full period. 1/

a. Diversification and asset selection

Although the financial reform will broaden the portfolio choices of both banks and nonbanks, a key task in designing a system of financial supervision and regulation for such a liberalized system is to identify what limits on the portfolio selection need to be retained or imposed in order to promote financial stability. Given the traditional linkages between banks and industrial firms, diversification of domestic risks, to the extent possible, would call for limitations on the proportions of total loans going to a given firm (either individually or as part of a group) and possibly limitations on the types of businesses to which banks, as opposed to other types of financial institutions, could lend.

It will also be important to regulate and monitor the banks' lending to commercial enterprises in which they have an equity interest. It is probably not reasonable to attempt to immediately ensure some separation of the banks from their debtors, although the building of such a wall over time would be desirable.

1/ (Cont'd from p. 18) and financial instability of the Chilean financial system during the late 1970s and early 1980s represented to an important degree a failure of the regulatory authorities to adequately monitor the creditworthiness of the industrial sector loans made by banks. As a result, McKinnon has proposed a financial reform strategy that during the transition to low inflation combines capital controls, maintenance of ceiling interest rates (adjusted to reflect inflation), preventing concentration of loans to one borrower, limits on banks' foreign exchange risk, and requiring large reserves against loan losses.

1/ A further supervisory problem is how to deal with the traditional shortages of trained supervisory personnel. Even when the supervisory authorities offer approximately competitive wages, financial reforms often lead to a sharp increase in the demand for trained accountants, lawyers, and economists. Given typical budget constraints, the authorities, therefore, often find it difficult to acquire a staff that is adequately trained to deal with comprehensive supervision of the financial system. In this situation, one technique for effective supervision would be to focus on a system of random audits by small but highly trained supervisory teams, coupled with significant penalties for the violation of supervisory regulations. The objective would be to create a credible expectation that a comprehensive audit could take place at any point in time.

b. Liability selection

If access to foreign financial markets is restricted by capital controls, then it must be realized that the ability of banks to diversify portfolio risks is correspondingly limited. In such circumstances, it may not be possible for banks to offer liabilities to the public that pretend to have a much more stable value than that of their assets. Financial institutions which offer fixed par-value liabilities should be required to hold a corresponding amount of short-term government securities. Alternatively, financial institutions might be required to offer a larger share of assets that have some element of equity participation in the fortunes of the bank. The share of "par-value" deposits, the nominal value of which are independent of the market value of the banks' assets, may, therefore, have to be much smaller than those typical of banks in industrial countries. Bank regulations should, therefore, be structured to at least allow for the use of such nonpar-value deposits.

c. Foreign currency exposure

Similar considerations suggest that domestic financial intermediaries' foreign currency exposure be carefully monitored and perhaps regulated. In the event the country experiences an adverse change in the terms of trade, a bank without foreign currency denominated assets will be unable to honor a substantial amount of foreign currency denominated liabilities. Such monitoring will become relatively more important as the limitations to access on foreign markets are related. Thus, a requirement that foreign currency risk be fully hedged might be useful.

IV. Supervisory Problems during the Transition to a Market-Oriented Financial System

In order to outline the supervisory policy initiatives that might support the liberalization of a repressed financial system, this concluding section presents a number of scenarios including a "worst case" situation. This allows us to focus on possible techniques for dealing with specific supervisory problems as well as to identify the extent of the contribution that supervisory policy can make to the reform process.

The scenario focusses on the situation where a repressed financial system is contributing to increasingly serious problems for the authorities. Initially the system is characterized as follows: (1) domestic and foreign savings are allocated through officially determined credit rationing administered by privately-owned financial institutions. As a result, many nonfinancial enterprises receive credit at below market rates and would not be economically viable otherwise; (2) the government collects an important share of taxes through high reserve requirements and moderate inflation; and (3) deposit and loan interest rates are fixed by the authorities. The initial impetus for liberalization is assumed to be that offshore financial intermediation becomes much more attractive to residents. This may simply be a joint product of the expansion of such services offered to residents of industrial countries. The increased attractiveness of offshore financial intermediation causes depositors to withdraw funds from domestic intermediaries and, to the extent possible, place these funds offshore. Domestic borrowers that are rationed out of domestic credit markets are also attracted to foreign sources of credit. Since many of these firms are parastatal enterprises, a significant share of the external debt is guaranteed by the government. The process of disintermediation has two important effects. First, traditionally favored nonfinancial enterprises face a flow of credit (in real terms) that is shrinking due to domestic disintermediation. Second, the government's real revenue falls because the base on which reserve requirements are calculated is shrinking.

In this situation, the government could respond by increasing reserve requirements but this would increase the disintermediation. Alternatively, the authorities could attempt to tighten capital controls, but these may be difficult to enforce and would serve to encourage the development of domestic curb markets. If the government takes no other actions to increase revenues, the financing of a larger government deficit by money creation will imply that the tax "rate" applied to the financial system will increase as the rate of inflation rises. But this would again only increase the pace of disintermediation. In effect, the formerly favored firms and the government will be competing for a shrinking pool of real savings available in the repressed financial system.

The inability of firms to obtain credit domestically requires that they depend more heavily on self-finance and external financing. However, firms would find it difficult to generate internal funds if they are already heavily dependent on subsidized credits to ensure their viability. Since external debt usually takes the form of foreign currency denominated credits, greater reliance on external funding (to the extent that is possible) would make the whole system much more sensitive to a change in interest rates in international credit markets and to exchange rate changes. In this environment, the shortcomings of the repressed financial system are obvious, and reducing the restrictions on the financial system would be a necessary part of any solution to these problems. However, while supervisory policy can contribute to the stability of such a reform process, it cannot be expected to offset the effects of other inappropriate macroeconomic policies. Several preconditions need to exist before a successful reform process is likely to develop in which supervisory policy can play a stabilizing role.

First, fiscal problems, including those that have been introduced by the loss of revenues from taxing financial transactions, must be resolved. A liberalization will not, in itself, improve the fiscal position of the government. In general, no liberalization scheme is likely to work if it is accompanied by increasing inflation rates that result in part from a reduced ability to tax financial intermediation.

To the contrary, it could be argued that much of the gain expected from market-determined credit allocation will be lost if market participants are mainly seeking inflationary hedges rather than productive investments. It is difficult to envision a successful reform in the presence of a large fiscal deficit financed principally by money creation. Even a strong supervisory policy would be able to do little to offset the destabilizing effects of the fiscal imbalance.

Second, to the extent that domestic disintermediation has resulted in a run up of gross external debt, there is the question of how domestic firms and financial intermediaries are to be allowed to cover the associated interest rate and exchange rate risks. Most recent analyses of the experiences of developing countries have stressed the need both to coordinate financial reforms with other structural reforms (e.g., tariff reductions) and to limit how rapidly domestic and international financial markets are integrated (in order to avoid capital inflows that lead to real exchange rate movements that make it more difficult for the trade reform to proceed). Even if full integration of domestic and international markets is delayed, there is still the issue of how domestic debtors can be allowed to hedge their exchange rate and interest rate risks. In a number of countries, the authorities have taken on much of the exchange rate risks by agreeing to allow domestic entities making debt service payments to purchase foreign exchange at special subsidized exchange rates. An alternative procedure, which could be monitored as part of supervisory policy, would be to allow domestic entities with external debt to acquire foreign assets equivalent to some percentage of their external debt. This would eliminate the need for multiple exchange rate systems and would improve the diversification of portfolio risks. Without such hedging possibilities, the financial reform process could be readily destabilized as a result of significant exchange rate or international interest rate movements. Once again, supervisory policy would be able to do little to counteract such developments.

Third, in allowing for a greater role for market forces in the determination of interest rates, the authorities must consider the possibility that financial institutions may be tempted to support nonviable firms that are a part of the same holding company. In dealing with this situation, the authorities are confronted with a tradeoff between preventing bankruptcies in the industrial sector and preserving the integrity and stability of the financial system. Although the authorities have in some cases avoided this tradeoff by acquiring ownership of a large portion of the financial and nonfinancial sectors, supervisory policy could be used at least to limit the banks' future commitment of funds to risky enterprises. Nonetheless, there would still remain the problem of how to deal with the potential insolvency of many nonbank enterprises. This will require a careful evaluation of the long-run viability of these enterprises, but special subsidies or purchases of government equity positions should be arranged through the normal fiscal accounts rather than through the financial system.

This worst case scenario indicates the circumstances (e.g., when macroeconomic policies are inappropriate) under which bank supervisory policy cannot make much of a contribution to the stability of the reform process. However, there is still the question of what contribution can be made if the other aspects of macroeconomic policy are such that a stable reform program is possible. The potential contributions can be divided into those designed to improve the initial structure of the financial system and those which affect the evolution of the financial system.

The initial changes in supervisory policy could focus on measures which would strengthen the audit process to prevent fraud, improve the diversification of portfolio risks, allow for nonpar-value deposits and substantial backing for par-value deposits, and strengthen bank capital positions. Since the portfolio choices of financial institutions will be expanded by the reform, the supervisory audit process must be strengthened substantially, especially in an environment where there has been a close linkage between individual banks and certain firms or industrial groups. Such supervisory audits would, therefore, have focus on limiting bank exposure to individual customers (be they individual firms or groups of firms) with special emphasis devoted to evaluating the collateral (if any) offered for each loan. A major problem in achieving a comprehensive audit program will be the lack of adequate trained personnel. To overcome this problem, the authorities could rely on a combination of regular reporting of financial institution accounts and random audits by highly-trained supervisory teams. Even if infrequent, such random audits could create the expectation of an audit at any time. Coupled with well-defined penalties for violation of supervisory rules (focusing on the removal of management), this auditing scheme could play an important role in inhibiting the type of fraud that has been evident in a number of recent reform programs.

The supervisory process could also be used to monitor a controlled diversification of portfolio risks for financial institutions. As already noted, part of such diversification would involve limiting the concentration of bank lending to individual customers. However, we have also argued that the ability of domestic financial institutions to diversify risks (especially those generated by exchange rate or international interest rate movements) is limited by the inability of banks to acquire foreign asset positions to help offset their foreign liabilities. While developments in a number of Southern Cone Latin American countries have indicated that uncontrolled access to external financial markets can lead to difficulties in periods prior to the establishment of control over the country's fiscal deficit and inflation, some controlled increase in the foreign asset positions of banks would help to hedge their external liability position and would help avoid the necessity of establishing special exchange rates for the repayment of debt.

While it would not be credible or useful to announce a removal of deposit insurance at the beginning of a reform period, regulatory policy should allow for the issuance of nonpar-value deposits, especially if the economy is likely to be characterized by macroeconomic instability for an extended period. Moreover, during a period of such instability, the ability of banks to issue par-value deposits should be constrained both by the requirement that these deposits be backed by holdings of high quality paper or loans and limitations on the rate of return that can be offered on such deposits (perhaps tied directly to the yield on the paper used as backing). In this situation, the objective would be to limit the use of par-value deposits primarily to transactions balances.

In making the transition from a repressed to a liberalized system, it will also be necessary to strengthen bank capital positions. In the pre-reform system, bank portfolio choices were heavily regulated and the value of deposits was implicitly secured not by bank capital but by government guarantee. In this environment, bank capital played only a limited role and in many systems was equal to quite a small percentage of deposits. Since explicit or implicit deposit insurance will likely be a part of most reformed systems, the larger set of portfolio strategies open to banks creates a moral hazard that may encourage financial institutions to take on excessive risks. As has been discussed, one aspect of dealing with this problem is more extensive monitoring of bank loan activities. At the same time, the potential cost of such portfolio strategies to the deposit insurance fund can be reduced by requiring stronger capital positions on the part of banks. This may also induce the owners to more closely monitor the activities of bank managers. One problem with requiring larger holdings of bank capital, especially at the beginning of the reform, is how bank owners are to raise the required funds. Since there is unlikely to be an open capital market on which securities or equity can be sold in significant amounts, additional capital will most likely have to come from owner subscriptions or retained earnings. If the earnings of banks are weak, then additions to capital may come slowly. In this situation, the authorities could strengthen bank capital requirements through the use of a mix of callable capital and increased owner subscriptions. Initially, most of the strengthening of capital positions could take place primarily through the addition of callable capital; but this would be complemented with the requirement that such callable capital be replaced over time (on a fixed schedule) with owner subscriptions. The use of callable capital would implicitly require a relaxation of the limited liability aspects of financial arrangements. In the absence of broad securities markets that would allow for a continuing market evaluation of bank performance, the use of callable capital may be the only direct means of ensuring close owner monitoring of bank management decisions.

As the financial reform proceeds and domestic policies bring about more stable macroeconomic conditions, supervisory policy can focus on enhancing the competitiveness of the financial system and opening the economy to external financial markets. Efforts to create more competition in the financial system will encompass building up strict limitations on the ownership of banks by their principal customers; relaxing constraints on entry of new domestic firms into the financial system; and allowing for greater influence of international markets on domestic financial conditions. While the specification of the appropriate extent of ownership of banks by nonbank holding companies is a complex problem in anti-trust policy, concentrated ownership will create major difficulties for the successful monitoring of banking risks and fraud. At a minimum, special disclosure rules, coupled with significant penalties for violating these rules, should be applied to business between banks and their industrial group owners. Moreover, the extent of such interlocking ownership should not be allowed to expand.

Competition can also be strengthened by allowing for freer entry of both domestic and foreign financial firms. While the entry of foreign firms raises the issue of the extent of foreign ownership of the domestic financial system, such entry would help reduce the typical oligopolistic nature of the domestic financial system. Moreover, in specifying the conditions under which new entry can take place, it may be useful to couple certain general minimum requirements for entry (e.g., minimum owner equity positions) with an auction of the entry rights. Such revenues may help to limit the initial revenue losses from the reform process. Allowing foreign financial institutions to enter the market would naturally have to be carefully coordinated with the removal of capital controls on transactions with external financial markets. Nonetheless, the presence of foreign financial institutions would provide competitive pressure on domestic banks to adopt internal prudential policies that match those imposed on foreign financial institutions by their home authorities.

None of these supervisory policies will be easy to implement in a developing country. However, it seems very unlikely that the "typical" institutional arrangements that have marked developing countries can continue to exist in an open and highly competitive financial environment.

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