

# **FINANCE AND THE REAL ECONOMY**

**ISSUES AND CASE STUDIES  
IN DEVELOPING COUNTRIES**

editors:

**Yilmaz Akyüz**

**Günther Held**

**United Nations University/World Institute for Development  
Economics Research  
Economic Commission for Latin America and the Caribbean  
United Nations Conference on Trade and Development**

*Responsibility for the papers rest solely with the authors.*

**Collection: Social and Political Studies**

Inscription Nº 88.481

I.S.B.N.: 956 - 7363 - 02 - 1

---

© S.R.V. Impresos S.A., Tocornal 2052, Santiago - Chile.

Printed in Chile

Compositor: Patricio Velasco G.

Santiago, September 1993

## INDEX



# INDEX

INTRODUCTION .....	11
FINANCIAL LIBERALIZATION: THE KEY ISSUES .....	19 ✓
Introduction .....	23
I. Interest rates and savings .....	24
II. Financial liberalization and deepening .....	27
III. Allocative efficiency .....	30
IV. Productive efficiency and cost of finance .....	35
V. Regulation of finance and financial stability .....	37
VI. Options in financial organizations .....	42
VII. External liberalization and financial openness .....	49
VIII. Conclusions .....	60
EAST ASIAN FINANCIAL MARKETS: WHY SO MUCH (AND FAIRLY EFFECTIVE) GOVERNMENT INTERVENTION? .....	69
Introduction .....	73
I. Why so much government intervention? .....	74
II. Repression in financial markets .....	76
III. Discipline of business .....	78
IV. The government's ability to impose performance standards .....	79
V. Keeping the costs of investment finance low: the case of the Republic of Korea's financial reform .....	83
VI. Conclusions .....	88
SAVINGS AND FINANCIAL POLICY ISSUES IN SUB-SAHARAN AFRICA .....	103
Introduction .....	107
I. Fragmentation of savings mobilization and financial intermediation in Sub-Saharan Africa .....	108
II. Financial dualism and market fragmentation .....	124
III. Policy required to overcome market fragmentation .....	128
THE INDONESIAN EXPERIENCE WITH FINANCIAL-SECTOR REFORM .....	149
Introduction .....	153
I. The 1983 financial reforms: background and content .....	154
II. The 1988-91 financial reforms: background and content .....	164
III. Effects of the financial reforms .....	168
IV. Conclusions .....	194

✓	PENSION SYSTEM REFORMS AND SAVINGS IN LATIN AMERICAN AND CARIBBEAN COUNTRIES WITH SPECIAL REFERENCE TO CHILE .....	201
	Introduction .....	205
	I. Current status and challenges of pension systems .....	206
	II. Population, employment and returns to pension system funds .....	215
	III. Development of capital markets and returns on pension system funds .....	219
	IV. The Chilean experience with an individual capitalization scheme .....	224
	V. Conclusions .....	237
✓	BANK REGULATION, LIBERALIZATION AND FINANCIAL INSTABILITY IN LATIN AMERICAN AND CARIBBEAN COUNTRIES .....	241
	Introduction .....	245
	I. Bank regulation and supervision .....	247
	II. Bank regulation in the Chilean financial liberalization experience .....	259
	III. Overview of recent financial instabilities in Latin American and Caribbean countries .....	273
	IV. Conclusions .....	286
	NOTE ON THE AUTHORS .....	291

## INTRODUCTION

Yilmaz Akyüz  
Günther Held





This book is a product of a joint work programme on "Financing for Development" between the Economic Commission for Latin America and Caribbean (ECLAC) and the United Nations Conference on Trade and Development (UNCTAD), designed to study national experiences in financial-policy reforms and mobilization of domestic resources with a view to drawing policy conclusions for developing countries. ECLAC and UNCTAD gratefully acknowledge the financial support provided by the World Institute for Development Economics of the United Nations University (UNU-WIDER), without which this work would not have been possible.

The present volume contains six papers on financial-policy issues and country experiences, presented at a joint ECLAC/UNU-WIDER/UNCTAD seminar held at ECLAC headquarters in Santiago, Chile, on 5-6 October 1992. In the first, Yilmaz Akyuz discusses key issues in financial liberalization. Next, Alice Amsden analyses East Asian financial policies, pondering the reasons why there is so much effective government intervention. Machiko Nissanke then addresses savings and financial-policy issues in Sub-Saharan Africa. Afterwards, Donald Hanna assesses the Indonesian experience with financial-sector reform, followed by Andras Uthoff's study of pension-system reforms and Günther Held's study of bank regulations, liberalization and financial instability in Latin America and Caribbean countries.

Akyüz examines a number of issues in financial liberalization, drawing on the experience of industrial and developing countries in the 1980s. He argues that the focus of financial policies in developing countries should be industrialization and stability, and that a common feature of all modern examples of industrialization is that they have succeeded in making finance serve industry and trade, not vice versa. He rejects as fallacy the proposition that financial liberalization stimulates savings, arguing that there is no simple

relation between the two. Financial liberalization often gives rise to deepening, but the latter is not always associated with a better use of resources since, *inter alia*, it tends to increase financial instability and fragility which, in turn, undermine both productive and allocative efficiency. Prudential regulations, while necessary, may not always be sufficient to prevent instability, particularly in developing countries, where financial liberalization often leads to escalation of interest rates and excessive risk taking. It may be necessary not only to act directly on the asset portfolios of banks but also to use interest ceilings. Efficiency also depends on the way finance is organized, since it influences the degree of risk, uncertainty and instability. The German-Japanese system of bank-based finance tends to be more stable and efficient than the Anglo-American system of capital-market-based finance, provided that the required fiscal and monetary discipline and prudential regulations are in place. Financial instability may be increased, and efficiency reduced, also by excessive financial openness. The speculative element that dominates international capital flows is capable of generating gyrations in exchange rates, giving rise to considerable uncertainty regarding prospective investment yields with respect of traded goods. This can be particularly damaging at a time when developing countries place greater reliance on trade as an engine of growth.

Amsden discusses the rationale for government intervention in financial markets in late industrializers and the factors that account for successful intervention in the Republic of Korea and Taiwan Province of China. Challenging the conventional wisdom that latecomers industrialize by "getting prices right" on the basis of low wages that procure them a comparative advantage in labor-intensive industries, she argues that low productivity even in such industries cannot always be offset by low wages because of political and social constraints. Nor does foreign capital help to overcome the productivity drawback: foreign capital typically lags behind, rather than leads, industrial development. Thus, late industrialization involves a process of using subsidies to "get prices wrong" so as to overcome the productivity handicap. What distinguishes the countries that are successfully "sneaking up" to the world technological frontier from those that are "stumbling back" or "staying behind" is not less State intervention but rather a different set of principles governing subsidy allocation. While subsidies in the slow-growing late industrializers have tended to be allocated according to the principle of "giveaway", in

the fast-growing ones they have tended to be allocated according to the principle of reciprocity. In both cases the government has disciplined labor, but in the East Asian countries it has also disciplined capital. Amsden goes on to examine the factors underlying the ability of the East Asian States to impose performance standards on business, and the ways and means by which control has been exerted. In the Republic of Korea before the 1980s, everything was prohibited except what the government specifically allowed; since then, all is allowed except what is specifically prohibited. The focus of financial policies has been to keep the cost of investment finance low: despite liberalization in the 1980s, the government has continued to provide subsidized credit to favored activities. As interest rates tended to rise, it has concentrated on the promotion of the stock market in order to provide cheap finance for investors.

Nissanke examines the factors impeding financial intermediation and mobilization of household savings in Sub-Saharan Africa (SSA), drawing on the experience of Ghana, Kenya, Malawi and Zambia. She notes that the potential of households to generate savings is much greater than is typically believed, particularly in rural areas. Most of these savings, however, are held in the informal sector, not because of low deposit rates, but primarily because of lack of access of households and small producers to bank credits. Thus she stresses the importance of credit in the mobilization of savings, maintaining that this is a task performed more successfully by the informal sector in SSA as regards households and small producers. Again, access to bank credit is impeded not so much by financial repression (i.e. direct credit allocation favoring the public sector, credit restrictions and the like) as by credit rationing by banks themselves, arising from imperfect and asymmetric information and costly contract enforcement. Banks in Africa are indeed extremely risk-averse and conservative in their lending policy. This, together with the transaction costs involved in tapping small savings, explains why they are also often unwilling to broaden their deposit base. This behavior is closely linked with non-performing loans that pervade the banking system in SSA and is reflected by an excess liquidity syndrome, whereby banks permanently hold liquid assets well in excess of legal reserve requirements. The unsatisfied demand is met by heterogeneous informal lenders, who have considerable comparative advantage in obtaining information and enforcing contracts. As Asian experience shows, segmented markets

can work efficiently provided that there are adequate linkages, but these are missing in SSA. Liberalization *per se* cannot overcome the impediments to mobilization of resources arising from market segmentation; nor is the capital market a panacea. More active policies would be needed to ease the constraints facing banks in financial intermediation and to reduce financial dualism.

Hanna begins by examining the theoretical links between finance, savings and economic growth. He then focuses on the financial and real effects of the financial reforms in Indonesia, which began with the removal of ceilings on interest rates and credit expansion, followed by the lowering of barriers to entry and the reduction of the direct role of the Central Bank in credit allocation. Liberalization led to a large and sustained increase in financial depth and breadth in the economy. Econometric work on real private savings shows that they were not hampered by increases in financial savings, independently of effects stemming from higher income, lower inflation and real interest rates. The maturity of bank loans also extended over the period of the reforms, better meshing with the investment needs of the economy. Cost efficiency improved as well, with a reduction in overheads; spreads between deposit and lending rates came down at all banks and moved closer to each other at different types of banks. However, given the difficulties in allocating credit because of informational and incentive problems, efficiency gains were more elusive. The author concludes that financial reforms have been successful in Indonesia despite several factors that differ from the standard prescription. First, the capital account was open at the time of reforms, and second, reform began at a time of important macroeconomic adjustment.

Uthoff examines the role of financial markets and pension funds management, and their regulation and supervision, in the context of current pension-system reforms in Latin American and Caribbean countries. Reforms today seek to achieve better pension benefits without generating financial and actuarial deficits, higher returns from portfolio investment of pension funds, and increased savings and the development of capital markets. Pension-system reforms require taking basic decisions regarding (i) the structure of financing (ii) the structure of administration; and (iii) the relation between contributions and benefits. One major concern of every reform taking place in the region has been the proper protection and capitalization of reserve

pension funds. One of the reforms which has attracted wide attention was implemented in Chile in the early 1980s. It replaced a pay-as-you-go and publically-administered system with one based on individual capitalization, predefined contributions and benefits and private administration of funds. The author emphasizes the following aspects with a view to providing good pension benefits: (i) the role of the State in closely regulating and supervising the portfolio allocation of pension funds, and in the provision of clear, timely and simple information to affiliates regarding their individual accounts; (ii) an efficient administration of reserve funds geared capitalizing them at real annual rates of return of at least 5 per cent on average, based on contributions equal to 10 per cent of a person's lifetime earnings profile; (iii) the preclusion of oligopolistic behavior on the part of pension-funds, and (iv) the provision of subsidies for participants unable to obtain minimum pension benefits on the basis of their own contributions. The system's success also depends on fiscal and monetary discipline.

Held looks at the outcome of different financial-policy experiences in Latin American and Caribbean countries in the last two decades on the basis of institutional arrangements of bank regulation and supervision. He argues that the emergence of bank solvency problems in a sample of nine countries in the region shares the common condition of severe flaws in prudential regulation and supervision. These flaws have quite commonly led to financial crises under financial liberalization, but they have also engendered solvency problems under financial repression. Since prudential regulation and supervision were not in place while credit allocation, interest rates and other financial variables were liberalized, these experiences could be better described as uncontrolled financial policies rather than financial liberalization. In many of the countries studied, highly unstable macroeconomic conditions were also responsible for severe solvency problems. The author concludes that of the countries in the sample, only the Chilean and perhaps the Costa-Rican experiences after the mid-1980s may be regarded as a fair testing ground for the effects of financial liberalization on savings and exports.

*Yilmaz Akyüz*  
*Günther Held*

Santiago and Geneva, August 1993.



# FINANCIAL LIBERALIZATION: THE KEY ISSUES

Yilmaz Akyüz<sup>1</sup>

---

<sup>1</sup> I have greatly benefited from comments and suggestions made by various people, including the participants of a workshop on Financial Globalization and Systemic Risk at the Center on International Economic Relations, University of Campinas, Sao Paulo, 15-16 June 1992; the participants of an ECLAC/UNU-WIDER/UNCTAD seminar on Savings and Financial Policy Issues in African, Asian, Latin American and Caribbean Countries, ECLAC, Santiago, 5-6 October 1992, particularly Carlos Massad and Gunther Held; and my colleagues in UNCTAD, Shahen Abrahamian, Andrew Cornford, Detlef Kotte and Cem Somel. The examination of financial efficiency in terms of various concepts of risk in section 5 owes a great deal to discussions with Jan Kregel. None of the persons mentioned are, of course, responsible for any errors. The opinions expressed in this paper do not necessarily reflect the views of UNCTAD, and the designations and terminology used are those of the author.





## CONTENTS

INTRODUCTION .....	23
I. INTEREST RATES AND SAVINGS .....	24
II. FINANCIAL LIBERALIZATION AND DEEPENING .....	27
III. ALLOCATIVE EFFICIENCY .....	30
1. Market failure .....	30
2. Successful intervention .....	32
3. Measuring efficiency .....	33
IV. PRODUCTIVE EFFICIENCY AND COST OF FINANCE .....	35
1. Risk, uncertainty and interest rates .....	35
2. Intermediation margin .....	36
V. REGULATION OF FINANCE AND FINANCIAL STABILITY .....	37
1. Risk-taking by banks .....	37
2. Prudential regulations .....	38
3. Interest ceilings .....	40
VI. OPTIONS IN FINANCIAL ORGANIZATIONS .....	42
1. Bank-oriented and market-oriented finance .....	42
2. Efficiency of alternative systems .....	43
3. Requirements for an efficient bank-oriented system .....	46
4. Control and regulation of stock-markets .....	47
VII. EXTERNAL LIBERALIZATION AND FINANCIAL OPENNESS .....	49
1. The concept of financial openness .....	49
2. The extent of financial openness in developing countries .....	50
3. Nature of capital flows .....	50
4. Recent capital flows to Latin America .....	53
5. Opening stock-markets to non-residents .....	55
6. Effects of volatile capital flows on investment and trade .....	56
7. Controlling capital flows .....	57
VIII. CONCLUSIONS .....	60
REFERENCES .....	63



## INTRODUCTION

In recent years financial policies in both industrial and developing countries have put increased emphasis on the market mechanism. Liberalization was partly a response to developments in the financial markets themselves: as these markets innovated to get round the restrictions placed on them, governments chose to throw in the towel. More important, however, governments embraced liberalization as a doctrine.

In developing countries, the main impulse behind liberalization has been the belief, based on the notion that interventionist financial policies were one of the main causes of the crisis of the 1980s, that liberalization would help to restore growth and stability by raising savings and improving overall economic efficiency; greater reliance on domestic savings was necessary in view of increased external financial stringency. However, these expectations have not generally been realized. In many developing countries, instead of lifting the level of domestic savings and investment, financial liberalization has, rather, increased financial instability. Financial activity has increased and financial deepening occurred, but without benefiting industry and commerce.

In many industrial countries the financial excesses of the 1980s account for much of the sharp slowdown of economic activity in the 1990s. Financial deregulation eased access to finance and allowed financial institutions to take greater risks. The private sector accumulated large amounts of debt at very high interest rates on the expectation that economic expansion would continue to raise debt servicing capacity while asset price inflation would compensate for high interest rates. Thus, when the cyclical downturn came,

borrowers and lenders found themselves overcommitted: debtors tried to sell assets and cut down activity in order to retire debt, and banks cut lending to restore balance sheets. Thus, the asset price inflation was replaced by debt deflation and credit crunch.

The recent experience with financial liberalization in both industrial and developing countries holds a number of useful lessons. This paper draws on this experience to discuss some crucial issues in financial reform in developing countries. The focus is on how to improve the contribution of finance to growth and industrialization; developing the financial sector and promoting financial activity is not synonymous with economic development.

## I. INTEREST RATES AND SAVINGS

One of the most contentious issues in financial policy is the effect of interest rates on savings. There can be little doubt that short-term, temporary swings in interest rates have little effect on private savings behaviour since that is largely governed by expectations and plans regarding current and future incomes and expenditures: they alter the level of savings primarily by affecting the levels of investment and income. However, when there is a rise in interest rates that is expected to be permanent (for instance, because it is the result of a change in the underlying philosophy in the determination of interest rates), will consumer behaviour remain the same, or will the propensity to save rise? The orthodox theory expects the latter to occur, and thus argues that removing "financial repression" will have a strong, positive effect on savings (Shaw, 1973, p. 73).

Empirical studies of savings behaviour typically do not distinguish permanent from temporary changes in interest rates. Recent evidence on savings behaviour in a number of developing countries that changed their interest-rate policy regimes shows no simple relation between interest rates and private savings. This is true for a wide range of countries in Asia and the Middle East (Indonesia, Malaysia, Philippines, Sri Lanka, Republic of Korea and Turkey -Cho and Khatkhate, 1989; Amsden and Euh, 1990; Lim, 1991; Akyüz, 1990), Africa (Ghana, Kenya, Malawi, United Republic of Tanzania and Zambia- Nissanke, 1990), and Latin America (Massad and Eyzaguirre, 1990) that undertook financial liberalization, albeit to different

degrees and under different circumstances.

But this should come as no surprise:

- Even according to the conventional theory, the personal propensity to save from current income depends on the relative strength of two forces pulling in opposite directions, namely the income and substitution effects. Moreover, if current income falls relative to expected future income, a rise in interest rates can be associated with a fall in savings. This often happens when interest rate deregulation occurs during rapid inflation and is accompanied by a macroeconomic tightening that results in a sharp decline in employment and income.

- A large swing in interest rates can lead to consumption of wealth, especially when non-interest income is declining. This is true especially for small savers who can react to increases in interest rates by liquidating real assets and foreign exchange holdings in order to invest in bank deposits in an effort to maintain their standard of living, consuming not only the real component of interest income but also part of its nominal component corresponding to inflation. This tendency is often reinforced by "money illusion" or the inability to distinguish between nominal and real interest incomes, something that tends to be pervasive in the early stages of deregulation. Thus, the initial outcome of deregulation can be to lower household savings, particularly if it is introduced at a time of rapid inflation. For instance in Turkey high deposit rates in the early 1980s allowed a large number of small wealth-holders to dissave.

- The behaviour of households may be quite different from that assumed in conventional theory. For instance, they may be targeting a certain level of future income or wealth. Higher interest rates may then lower household savings by making it possible to attain the target with fewer current savings. For instance, in the Republic of Korea and Japan low interest rates combined with high real estate prices have tended to raise household savings (Amsden and Eu, 1990).

- Financial liberalization can lower household savings by allowing easier access to credit and relaxing the income constraint on consumption spending. In many countries financial liberalization has, indeed, given rise to a massive growth in consumer loans (such as instalment credits for cars and other durables, credit card lending, etc.). This appears to have been one reason why the household savings rate declined and the debt/income

ratio rose in the 1980s in the United States -something which is at the heart of the current debt-deflation process (UNCTAD 1991, part two, chaps. I-II; 1992, part two, chap. II). An inverse correlation between household borrowing and savings ratios has also been observed in most other OECD countries since the early and mid-1980s (Blundell-Wignall and Browne, 1991).

- Even if financial liberalization and higher interest rates do not lower personal savings, they can reduce total private savings and aggregate domestic savings by redistributing income away from debtors -a category which typically includes corporations and the government. In many developing countries undistributed corporate profits are an important part of private savings and the most important source of business investment. Generally, the savings rate is higher than for households: corporate retentions are high, ranging between 60 to 80 per cent of after-tax profits, because ownership is usually concentrated in the hands of families and there is no outside pressure to pay out dividends (Honohan and Atiyas, 1989; Akyüz, 1991). The redistribution of income from corporations to households through higher interest rates can thus reduce total private savings even if it raises household savings. In developing countries this effect can be particularly strong because firms operate with high leverage, loan maturities are short and corporate debt usually carries variable rates. Thus, a rise in interest rates not only raises the cost of new borrowing but also the cost of servicing existing debt. Evidence from the studies already mentioned suggests that in a number of countries (e.g. Philippines, Turkey, Yugoslavia), sharp increases in interest rates were a major factor in the collapse of corporate profits and savings that took place particularly in the early phases of financial liberalization.

Such adverse effects are especially marked when interest rates are freed under rapid inflation. There is widespread agreement that financial liberalization undertaken in an unstable environment may make things worse, and that such reforms should be undertaken only after macroeconomic balances are attained (World Bank 1989; Edwards, 1989). Nevertheless, many countries have resorted to liberalization as part of shock therapy against stagflation.

Thus, interest rate increases are not a reliable instrument for raising domestic savings, but can damage macroeconomic stability and investment. The crucial question is how to design interest rate policies compatible with sustained stability and growth.

The historical experience of major industrial countries holds some useful lessons. Until the 1980s, real short-term interest rates in these countries were slightly negative and real long-term bond rates slightly positive; i.e. about one to two per cent below and above inflation respectively. Until the oil shocks of the 1970s, there was sustained growth and price stability. But since the beginning of the 1980s (for reasons to be discussed later), real interest rates have been, on average, more than twice their historical levels. Nevertheless, these countries enjoyed one of the longest periods of economic expansion in the postwar period with low inflation. This generated a widespread perception that high real interest rates do not impede investment and growth, but help price stability. However, the subsequent debt-deflation-cum-recession has clearly shown that economic expansion attained at very high real interest rates eventually depresses income, investment and growth.

## II. FINANCIAL LIBERALIZATION AND DEEPENING

It is generally agreed that financial liberalization raises financial activity relative to the production of goods and non-financial services. However, there is much less consensus on the causes and effects of this "financial deepening". According to the financial repression theory (McKinnon, 1973; Shaw, 1973) financial deepening represents increased intermediation between savers and investment because higher interest rates raise savings and shift them from unproductive assets towards financial assets, thereby raising the volume of productive investment.

While it is true that financial liberalization can shift existing savings toward financial assets, **reallocation** is not the only or even the most important reason for financial deepening. Financial liberalization can also lead to deepening by **redistributing** savings and investment among various sectors, and by creating greater opportunities for **speculation**. Since these can worsen the use of savings, financial deepening is not necessarily a positive development.

The prime role of the financial system in the savings/investment process is to intermediate between deficit and surplus sectors rather than to transfer aggregate savings into aggregate investment. Deficit sectors (typically the

corporate sector and the government) save as well as invest, while surplus sectors (households) invest as well as save. Thus, redistribution of savings and investment among sectors can, by changing sectoral surpluses and deficits, result in financial deepening without any change in aggregate savings and investment - for instance, as already noted, when higher interest rates redistribute income and savings from debtors to creditors. Even when this does not alter the volume of aggregate savings (i.e. lower savings of debtors are compensated by higher savings of creditors), it increases deficits and surpluses and, hence, the amount of financial intermediation. Indeed, financial intermediation can increase while aggregate savings and investment fall (Akyüz, 1991). This can happen even under the orthodox assumptions that saving rates are positively related to the interest rate and that savings determine investment and growth (Molho, 1986, p. 112).

In such cases financial deepening is a symptom of a deterioration of the finances of the corporate and public sectors, reflecting an accumulation of debt in order to finance the increased interest bill rather than new investment. Financial deepening driven by such Ponzi financing has been observed in a number of countries (e.g. Turkey, Yugoslavia and New Zealand) where financial liberalization redistributed income in favour of creditors and encouraged distress borrowing.

Similarly financial deepening can be the result of a redistribution of a given volume of aggregate investment, when, for instance, higher interest rates induce households to reduce investment in housing and shift to bank deposits. Then, the increase in the household surplus and in the volume of deposits represents a decline in household investment, not a rise in savings.

Financial liberalization often raises holdings of both financial assets and liabilities by firms and individuals at any given level of income, investment and savings. This tendency to borrow in order to purchase assets is driven by the increased scope for capital gains generated by financial liberalization. Liberalization increases the instability of interest rates and asset prices, thereby raising prospects for quick profits through speculation on changes in the market valuation of financial assets. It also allows greater freedom for banks and other financial institutions to lend to finance activities unrelated to production and investment, and to firms and individuals to issue debt in order to finance speculation. These can generate considerable fi-



nancial activity unrelated to the real economy, and lead to financial deepening -as in the United States in recent years through leverage takeovers, mergers, acquisitions and so on (UNCTAD, 1992, part two, chap. II).

Deepening can also result from the impact of changes in interest rates on the form in which savings are held. Indeed, one of the main reasons why savings do not in practice strongly respond to increases in real interest rates is the existence of a range of assets with different degrees of protection against inflation; returns on such assets also influence savings decisions. The greater the influence of interest rates on the allocation of savings among alternative assets, the smaller the influence on the volume of savings.

Whether shifts of savings into financial assets improve the use of resources depends on where they come from and how efficiently the financial system is operating. Clearly, a switch from commodity holdings can improve the use to which savings are put. But, contrary to widespread perception, there is very little evidence of extensive commodity holding in developing countries as a form of savings. Such holdings entail substantial storage and transaction costs, making their own real rate of return typically negative. Moreover, there is considerable uncertainty regarding the movement of prices of individual commodities even when the general price level is rising rapidly. These factors, together with the existence of more liquid, less costly inflation hedges (such as foreign currency or gold) reduce the demand for commodities as a store of value. The large commodity holdings that exist in African countries typically reflect the nature of production and non-monetization of the rural economy. Consequently, increases in deposit rates are often unable to induce liquidation of commodity stocks (Aryeetey *et al.*, 1990; Mwega, 1990; Nissanke, 1990).

An increase in domestic interest rates can induce a shift from foreign currency holdings to domestic assets, and repatriation of flight capital. Many governments, however, have found it necessary to legalize foreign currency holdings and introduce foreign currency deposits for residents and to offer very high interest rates in order to attract foreign currency holdings to the banking system. Certainly, in both cases the portfolio shifts can increase the resources available for investment and deepen finance. However, as discussed in section VII, capital flows and dollarization resulting from such policies often prove troublesome for macroeconomic stability, investment and competitiveness.

Freeing interest rates in the formal sector can also trigger a shift away from informal markets. However, the scope of such shifts may be limited since the reason for informal markets is not always interest rate controls and credit rationing. They often provide services to small and medium producers who do not have access to bank credits. Since financial liberalization does not always improve their access to banks, informal markets continue to operate after the deregulation of interest rates. As savings placed in the informal sector assure these producers some access to credit, they are not always willing to shift to banks when deposit rates are raised (Chipeta, 1990; Aryeteey *et al.*, 1990; Mwegu, 1990). On the other hand, when funds are shifted to banks, the cost of finance for informal market borrowers can rise considerably. Moreover, such shifts can result in financial "shallowing" because informal markets provide more financial intermediation due to the absence of liquidity and reserve requirements (Wijnbergen, 1983; Owen and Solis-Fallas, 1989).

It can thus be concluded that financial deepening brought about by liberalization is not necessarily associated with a higher level and/or better use of savings. Indeed, the empirical evidence does not support the claim that financial deepening is associated with faster growth (Dornbusch and Reynoso, 1989). The degree of financial deepening is therefore not a good measure of the contribution of finance to growth and development.

The relevant issue in financial reform is efficiency rather than deepening. There are various concepts of efficiency of financial markets and institutions (Tobin, 1984), but from the point of view of the role of finance in economic growth and development, the conventional notions of **allocative** and **productive** (i.e. cost) efficiency are the most relevant ones.

### III. ALLOCATIVE EFFICIENCY

#### 1. Market failure

Financial markets and institutions can be said to be **allocatively efficient** if they direct resources to their more socially productive use, i.e. if they finance investment with the highest social rates of return. This concept broadly corresponds to what Tobin (1984, p. 3) calls functional efficiency and

provides a rationale for devoting resources to financial activity.

Allocative efficiency is closely related to the extent of "the accuracy with which market valuations reflect fundamentals" ("fundamental-valuation efficiency", Tobin, 1984, p. 5). Prices of financial assets provide market signals for resource allocation. Speculative bubbles in securities markets influence investment and consumption decisions as well as financing plans of corporations, while exchange rate misalignments cause misallocation of resources between traded and non-traded goods sectors.

There is ample evidence that in industrial countries financial liberalization has resulted in a considerable increase in the volatility of interest rates, equity prices, exchange rates and the prices of real estate, gold, silver and collectable assets, and caused large and sustained deviation of these from their fundamental values (e.g. Cutler, Poterba and Summers, 1990; Miller and Weller, 1991; Kupiec, 1991). Similarly, "takeover mania, motivated by egregious undervaluations, is testimony to the failure of the market on this fundamental-valuation criterion efficiency" (Tobin, 1984, p. 6). These deviations reflect pervasiveness of speculative forces: "the similarity of patterns in a wide range of asset markets suggests the possibility that they are best explicable as a consequence of the speculative process itself." (Cutler, Poterba and Summers, 1990, p. 36).

Quite apart from the distorting effects of speculation on asset prices and resource allocation, financial markets also fail to allocate resources efficiently because of a number of imperfections not attributable to government intervention. These include missing markets, asymmetric and incomplete information, and various externalities not mediated by markets (Stiglitz and Weiss, 1981; Greenwald and Stiglitz, 1986; Stiglitz, 1989a; Datta-Chaudhuri, 1990). Such market failures are more serious in developing than in developed countries and tend to obstruct the learning process which plays a key role in modern industrialization. "Learning ... means that it will not be optimal to pursue myopic policies; one cannot use current comparative advantage as the only basis for judgements of how to allocate resources. Moreover, it may be optimal to initially incur a loss; the imperfections of capital markets thus may impose a more serious impediment on LDCs taking advantage of potentials for learning" (Stiglitz, 1989a, p. 199).

## 2. Successful intervention

Governments in many countries have therefore acted to influence the allocation and pricing of finance as part of their industrial policy. Indeed, almost all modern examples of industrialization have been accompanied by such intervention. Directed and preferential credits have been the most important instruments of some successful industrializers in East Asia (Amsden, 1989; Bradford, 1986; Cho and Khatkhate, 1989; Hanson and Neal, 1985; Kato et al., 1993; Westphal, 1990). As noted by a recent report, in Japan an important instrument of intervention was policy-based finance, used through the Japan Development Bank "to induce the private sector to achieve specified policy objectives". It was based on the recognition that "if the private financial market were perfect (in terms of competition, information and freedom of transactions) policy-based finance would be unnecessary. In reality, however, there are limits to the perfect fulfillment of these conditions in the financial market. Thus, one can understand the significance of policy-based finance as one means of compensating for these market limitations" (Kato et al., 1993, p. 28).

In the Republic of Korea "government intervention was necessary not just to steer credit in the right direction but to underwrite production during the learning process that was far more involved than what is commonly meant by 'infant industry protection'. Subsidized credit meant the difference between establishing new industries or not, rather than the difference between high and low profits" (Amsden and Euh, 1990, p. 31). Thus, "extensive intervention by the government with South Korea's financial system can be viewed as an internal capital market and, consequently, it could have led to a more efficient allocation of credit than possible in a free-market financial system" (Lee, 1992, p. 187).

But many countries have directed credit with much less success. The differences between successful and unsuccessful intervention have been partly due to skill in "picking winners". While it is true that governments are not necessarily better equipped to do this than markets, the experience strongly suggests that whether a firm (or an industry) is a winner depends on how it is managed. A number of factors seems to separate success from failure in this respect:

- The ability of governments to prevent interventionist finance from

degenerating into inflationary finance, to resist excessive credit expansion and to ensure fiscal discipline: macroeconomic stability appears to have been a more important factor in growth than financial liberalization and deepening (Dornbusch and Reynoso, 1989);

- Making provision of support conditional upon good performance, and seeing that government support and protection are actually used for the purposes intended rather than simply as a handout;

- Designing objective, well-defined and market-based performance indicators -namely, competitiveness in world markets and export performance- in order to assess the nature and extent of the support needed, and whether it is being used effectively (Amsden, 1989; Westphal, 1990);

- Attaining social consensus on the purpose and modalities of government intervention. As noted by a recent report, this was particularly important in the success of the policy-based finance in Japan: "when the government does intervene in private economic activities, or carries out economic activities itself in place of private actors, it must not merely give some abstract reason, but rather clearly explain the concrete need for and obtain social agreement on those activities" (Kato et al., 1993, p. 28). This has been achieved through extensive participation of the private sector in the policy-formation process based on the "public-private cooperative system", i.e. in the advisory councils, including "industry leaders and general citizens", as well as bureaucrats, which is still widely used (Kato et al., 1993, p. 85).

### 3. Measuring efficiency

As noted above, the main impulse to financial liberalization in developing countries has come from the frustration with ineffective and wasteful intervention and the belief that liberalization would raise allocative efficiency. Thus, many countries have chosen to liberalize finance rather than reform their industrial policies and state intervention. However, this has not always resulted in a better allocation of credits.

In the orthodox theory, better allocation means a tendency towards equalization of rates of return on investment in different sectors. Similarly, a more efficient credit allocation is expected to reduce the variation of the cost of finance across borrowers on the assumption that profit maximiza-

tion requires equalization of marginal cost of borrowing and marginal rate of return on investment (Cho, 1988).

These measures, however, are highly inappropriate. First of all, as discussed below, one important determinant of the rate of return and cost of capital is risk. When projects carry different risks, an optimal allocation must reflect these differences in rates of return and borrowing costs. More important, when capital markets are short-sighted, equalization of profit rates typically means discriminating against those firms and industries with dynamic comparative advantages and learning potentials that have to incur initial losses. Since financial liberalization is often associated with a shortening of time horizons, a tendency towards equalization of rates of profit and cost of capital could worsen allocation.

Financial liberalization normally reduces or eliminates credits on preferential terms and hence diminishes variations in cost of capital across sectors. Therefore, measuring the effect of financial liberalization on allocative efficiency in terms of reduced variations in cost of capital is tautological. On the other hand, a successful industrial policy could reduce variance in borrowing cost by diminishing the number of industries requiring special treatment. For instance, it has been argued that the decline in the inter-industry variance of borrowing costs in the Republic of Korea in the 1980s compared to the 1970s reflects the success not of financial liberalization as suggested by some authors (e.g. Cho, 1988), but of industrialization policies (Amsden and Euh, 1990, pp. 43-44).

Financial liberalization in developing countries often changes significantly the sectoral allocation of credit. Evidence suggests that typically the shares of service sectors, consumer loans and property-related credits tend to increase at the expense of industry. This may result from a reduction in directed credit allocation, which often favours industry and does not necessarily indicate a deterioration of resource allocation. However, it is important to note that these changes are often associated with shortening of maturities and declines in demand for manufacturing investment credits, when liberalization takes place in an unstable environment and results in very high and volatile interest rates.

Perhaps more important indicators of the effects of financial liberalization on allocative efficiency are the number of non-performing loans, loan default rates and bank failures. Evidence from a number of countries

(e.g. the Southern Cone countries, Indonesia, the Philippines, Turkey and Yugoslavia) indicates that deregulation of interest rates and elimination of restrictions on financial activities have almost always been followed by increases in the proportion of non-performing loans in bank portfolios and in bank failures. Again, resort to liberalization to cure instability and stagnation has often played an important role. These, together with external shocks, had already greatly weakened the balance sheets of the corporate sector and financial institutions. Deregulation of interest rates, often accompanied by monetary tightening, further disrupted the financial position of the highly-leveraged corporate sector, leading to increased loan default rates and eventually to bank failures.

#### IV. PRODUCTIVE EFFICIENCY AND COST OF FINANCE

The traditional concept of productive efficiency refers to microeconomic efficiency of firms in producing goods and services with given prices for their inputs. When applied to the financial system, this concept would simply be translated into intermediation cost or interest spread. However, one must approach productive efficiency from a broader perspective and define it as the ability of the financial system to provide finance at the lowest possible cost. This depends not only on the extent to which financial intermediaries minimize the cost of intermediation between the ultimate lender and the ultimate borrower, but also on the ability of the entire financial system to minimize the interest paid to the ultimate lender (the lender's interest rate).

##### 1. Risk, uncertainty and interest rates

The Keynesian notions of lender's and borrower's risks provide an appropriate framework for discussing the determinants of cost of finance and the effects of financial liberalization on productive efficiency (Keynes, 1936, p. 144). An important determinant of the lender's interest rate is the risk due to the possibility of default by the borrower, i.e. the lender's risk. First, there is the risk of voluntary default, or what Keynes calls the moral risk: the lender must make an allowance for the possibility of dishonesty of

the borrower. Second, there is the risk of involuntary default arising from imperfect foresight, i.e. from uncertainties over factors outside the control of the borrower which affect profitability. This risk, called the borrower's risk or the pure risk, is inherent in all investment decisions and cannot be eliminated. However, it can be reduced by access of the borrower to better information and stabler economic conditions. The pure risk is closely related to allocative efficiency. When finance is not efficiently allocated, the probability of involuntary default increases. This raises the lender's risk and the cost of finance: allocative inefficiency thus aggravates cost inefficiency.

The lender also runs a risk regarding the capital value of his assets due to uncertainties over future interest rates and asset prices (as well as the price level). The capital-value uncertainty increases with the volatility of asset prices and interest rates, as well as with the increased frequency of bank failures. These raise liquidity preference and lower the demand for capital-uncertain assets, thereby shortening the maturities of financial assets and pushing up interest rates, especially long-term. The degree of productive efficiency of the financial system therefore depends in part on its ability to attain stability and reduce capital-value uncertainty.

The search for greater allocative efficiency through financial liberalization can greatly reduce the productive efficiency of the financial system by giving rise to increased financial instability and raising the cost of finance to investors. This is a systemic influence, quite independent of any rise in interest rates that may result from eliminating ceilings. Indeed, the financial instability and bank failures stemming from financial liberalization in the major industrial countries, especially the United States, in the 1980s played a major role in considerably raising long-term interest rates and reducing their sensitivity to changes in short-term rates (Akyüz, 1992, pp. 59-60).

## 2. Intermediation margin

The second component of the cost of finance, namely the intermediation margin, reflects the microeconomic efficiency in the use of resources devoted to financial activity. This is particularly important in bank finance, even though mark-ups of intermediaries in stock exchanges are not negligible (Tobin, 1984, p. 4). The spread between lending and deposit rates is influen-



ced by operating expenses, legal reserve and liquidity requirements, and the pressure of competition on profit mark-ups. Reserve and liquidity requirements are typically lowered as part of financial liberalization. Similarly, operating expenses and profit mark-ups tend to fall as entry barriers are dismantled.

However, financial liberalization also tends to increase the spread by raising the rate of default on loans, since banks often pass the cost of bad loans onto other borrowers. Therefore, erroneous investment and financing decisions and allocative inefficiency can lead to cost inefficiency by raising not only the lender's interest rate, but also the spread. The increase in the cost of finance, in turn, can push sound borrowers into insolvency, thereby increasing loan default rates and pushing up the lender's risk and the lender's interest rate further. This often leads to Ponzi financing whereby banks increasingly lend to high-risk, speculative business at very high interest rates in order to cover high deposit rates and defaults. Such a process is unsustainable, but it can nevertheless cause considerable waste.

## V. REGULATION OF FINANCE AND FINANCIAL STABILITY

The preceding discussion has shown that stability is an essential attribute of an efficient financial system. After many episodes of turmoil in financial markets in both developing and developed countries, there now appears to exist a consensus on the need for prudential regulations in order to attain stability. But, can such regulations and supervision prevent financial instability when interest rates are allowed to fluctuate freely and banks are left free to compete for deposits by bidding up interest rates?

### 1. Risk-taking by banks

The theory of finance suggests that because information is imperfect and asymmetric (the borrower knows more about his investment than the lender) and contracts are incomplete (lenders cannot control all aspects of the borrower's behaviour), banks implement their own quantity rationing by imposing credit ceilings, and restrict deposit and loan rates in order to avoid excessive risk-taking (Stiglitz and Weiss, 1981; Davis, 1993, pp. 13-

16). Since higher interest rates tend to reduce the average quality of loans through adverse selection (lending to high-risk borrowers willing to pay high interest rates) and moral hazard (inducing "good" borrowers to invest in riskier projects), the expected rate of return net of default will decline once the loan rate has reached a certain level. This implies that even in the absence of prudential regulations, there will be limits to price competition and risk-taking in the banking sector.

However, self-restraint cannot always be relied on to prevent financial instability, particularly in developing countries. Banks tend to engage in speculative financing and excessive risk-taking provided that failure does not have serious consequences for their shareholders and managers. This happens when they can easily acquire deposit insurance, enjoy implicit or explicit guarantees for bail-out and have easy access to the lender-of-last-resort facility, and when sanctions and penalties for failing bank managers are inadequate. This is often the case in developing countries where governments are often all too ready to rescue banks in trouble. The moral hazard that results is made worse by the existence of deposit insurance schemes designed to give protection to depositors and attract funds into banks. Banks often have to pay very little for the insurance coverage while having all the incentives to raise deposit rates to mobilize funds to invest in high-return, high-risk, and often speculative projects.

Furthermore, in developing countries large non-financial corporations are often able to exert strong influence over banks, causing bank lending to be concentrated on a small number of firms, at the cost of increasing their own vulnerability. Corporate distress borrowing and Ponzi financing tend to be much more common in developing countries, and these become particularly visible and problematic during episodes of financial liberalization. The intense competition that banks in many developing countries face from unregulated financial markets can also lead to higher interest rates and greater risk-taking.

## 2. Prudential regulations

Evidence from both developed and developing countries shows that a judicious combination of effective prudential and protective regulations is necessary to prevent financial instability. In many developing countries,

however, regulations restricting excessive risk-taking and/or covering such risks are absent. In some countries government restrictions on lending to a single firm and the acquisition of real estate or shares in non-financial corporations are strict but not implemented. Legal provisions against bad assets are either absent or ignored, and capital requirements are inadequate, non-existent or unimplemented. There is widespread non-compliance even with legal reserve requirements, not always because they are especially high, but because the monetary authorities are unable to impose sufficient penalties.

However, prudential regulations, while necessary, may not always be sufficient to prevent financial instability. With the freeing of deposit rates, considerable competition can build up between the newly deregulated and unregulated financial sectors, giving rise to sharp increases in deposit rates, thereby raising the loan rates and deteriorating the quality of bank assets as high-yield, high-risk lending replaces safer but lower-yielding portfolios. It is not always possible to check this process through prudential regulations on the asset side of banks' balance sheets. Pressures can develop to allow banks to enter into new lines of business in order to restore their profitability and viability in the face of higher deposit cost. Such pressures will often find favour with the liberalist view underlying interest rate deregulation, and hence result in the relaxation of constraints on types of bank lending and investment.

The experience of the United States in the 1980s illustrates how easily such a process can develop (UNCTAD, 1992, part two, chap. II). As the Fed moved away from targeting interest rates to monetarism in order to reduce inflation and the Regulation Q ceilings on deposit rates were lifted, banks with long-term portfolios with fixed interest rates (particularly mutual savings banks and Savings and Loan Associations, S&Ls) experienced serious difficulties. Considerable pressure developed for the introduction of legislation to attract deposits to these institutions (e.g. raising deposit insurance limits) and to allow them to invest in high-yield, high-risk assets. Thus, these institutions, and subsequently commercial banks, increasingly financed consumer and credit card loans, high-yield non-investment grade (junk) bonds, leverage buy-outs, real estate acquisition, and development and construction loans. A large amount of debt was accumulated by households and firms while banks acquired high-risk assets. This process ended

with the collapse of the S&Ls with an estimated cost of about \$200 billion, and was replaced by the debt-deflation process already mentioned.

Stricter capital adequacy requirements of the type recently introduced by BIS (UNCTAD, 1992, part two, Annex I) could have helped to slow down this process but would probably not have prevented it. As there was simultaneously a speculative bubble in the stock-market, banks would have had no difficulty in raising capital on very favourable terms to cover their high-risk investment, but would have remained exposed to risks on both sides of their balance sheets. Indeed, this is exactly what happened in Japan where banks can account as capital almost half of accrued but unrealized capital gains on equities and use them to offset potential loan losses. As the stock-market was rising rapidly in the 1980s, banks counted on these gains instead of setting aside reserves against potential losses on high-risk, property-related lending. The subsequent decline in stock prices, together with the fall in property prices, thus created difficulties for banks from both sides of their balance sheets.

There are also other instances of boom and bust where rapid expansion of some banks through high-risk, high-return lending increased their stock prices sharply and allowed them to raise capital at costs lower than the prudent banks. "In such cases neither public scrutiny of bank balance sheets, nor capital ratios would have prevented the propagation of the crisis" (Kregel, 1993, p. 10).

### 3. Interest ceilings

In short, competition among financial institutions can easily result in escalation of interest rates and/or excessive risk-taking either because prudential capital requirements become ineffective or pressures build up to relax controls over bank asset portfolios. Such risks are greater in developing countries. This, together with the fact that stability of interest rates and asset prices is essential for an efficient financial system, constitutes a strong case in favour of controlling interest rates as well as bank lending.

An effective way of doing this is to impose statutory ceilings on deposit and/or loan rates. Such ceilings were widely used in industrial countries until recent years. In Japan, for instance, interest rate regulations played a crucial role as a "policy-based framework established throughout the high

growth period" (Kato et al., 1993, p. 122), and have not yet been abolished totally. Again, the recent legislation in the United States regarding the depository institutions (the Federal Deposit Insurance Corporation Improvement Act of 1991, Jones and King, 1992) stipulates mandatory restrictions on deposit interest rates for undercapitalized banks in the context of capital-based policy of prompt corrective action. Since undercapitalization is widespread among banks in developing countries, the scope for the application of such restrictions must be much greater.

Regulation of short-term interest rates through intervention in inter-bank markets is also essential for attaining greater financial stability and preventing frequent bank failures, particularly when there is considerable maturity mismatching between banks' assets and liabilities. Under such conditions, large swings in interest rates can create serious dilemmas for banks. If banks respond to an unexpected increase in market interest rates by raising deposit rates, their profits can be sharply reduced and their solvency threatened. If they do not, or if they are prevented from doing so by deposit ceilings, they may suffer a considerable deposit drain. Banks can respond to increased swings in short-term rates with variable-rate loans or by shortening the maturities of their assets, as they have indeed done in many countries, but when done on a large enough scale this simply transfers the interest rate risk onto the borrower and replaces it with greater credit risk.

It should be kept in mind that control over interest rates through ceilings and intervention does not eliminate the need for certain types of prudential regulations to reduce financial fragility, i.e. vulnerability to default in the corporate and household sectors (Minsky, 1982, 1986; Davis, 1993). This is particularly true in developing countries where the level of economic activity is much more variable. When activity is buoyant, banks tend to lend increasingly against assets which carry considerable capital risk, including not only illiquid assets such as property but also securities; they also expand consumer credits and invest directly in securities and property. But when the expansion comes to an end and incomes and asset prices start to fall, the quality of bank assets can deteriorate rapidly, and even set off a debt-deflation process and credit crunch. Reducing the fragility of the financial system thus calls for prudential regulations designed to prevent excessive investment and lending with considerable capital risk arising from their susceptibility to changes in the pace of economic activity.

## VI. OPTIONS IN FINANCIAL ORGANIZATIONS

The discussions above suggest that the efficiency of the financial system crucially depends on the way it is organized, because that influences the nature and the degree of risk, uncertainty and instability. On the other hand, the experience of industrial countries shows that there is no single way of organizing finance. Consequently, an important issue in financial reform in developing (and Eastern European) countries is what types of financial institutions and markets need to be promoted.

### 1. Bank-oriented and market-oriented finance

It is possible to distinguish between two broad types of financial arrangements according to whether or not banks and capital markets serve distinct functions. In an ideal-type **differentiated** system, banks act primarily within the monetary system, arranging payments and extending short-term commercial credits. Corporations obtain investment finance in the capital market by direct security issues, often via the intermediation of investment banks for underwriting and brokerage. Ownership of companies is highly fragmented: an important part of corporate securities is held by households and institutional investors in diversified portfolios. Such a segmentation is the essence of the Anglo-American system which we will call, for brevity, the **market-oriented** system<sup>2</sup>.

In the German-type of **universal banking** (the **bank-oriented** system), on the other hand, commercial banks play a much greater role at all stages in the process of corporate investment. They provide investment finance and function also, like investment banks. They also have considerable control over firms both through their own equity holding and proxy votes for private investors, and by appointing representatives on the boards of firms. They lend primarily to firms in which they hold equity interest. Hou-

---

<sup>2</sup> The description of various systems here draws largely on Corbett and Mayer (1991), Kregel (1991) and Somel (1992). For a summary account of the structural aspects of these systems, see also Davis (1993, pp. 23-26). We do not examine here how these different systems evolved, but there can be little doubt that government policies and regulations played a major role.

sehold financial wealth tends to be held in banks rather than direct securities, and bank credits account for a larger proportion of external financing of corporate investment.

There are certainly a number of variants combining elements of both systems. In the United Kingdom, commercial banks do not have much control over corporations, but there is no legal separation between commercial and investment banking. In Japan, commercial banks hold corporate equities but are prevented from playing a major role in the underwriting of corporate securities. Individual ownership of stocks is much smaller than ownership by financial and non-financial corporations, and corporate equity is controlled through interlocking shareholding within industrial groups where banks play a central role. Banks also control other financial institutions (e.g. pension funds) that invest in equity. Lending by banks and insurance and pension funds usually takes place within the same groups and involves purchase of company bonds as well as loans. In Japan, bank credits have played a much more important role in financing business growth than in the other countries discussed here, although recently there has been a shift to securities markets.

## **2. Efficiency of alternative systems**

In recent years many developing countries have been seeking to institute and promote capital markets, often as part of the structural adjustment programmes. One of the main reasons for privatizing public enterprises has been precisely to promote capital markets. Similarly, access to equity markets has been granted to non-residents in order to boost demand.

There are a number of arguments in favour of developing capital markets as a way of overcoming the paucity of investment finance in developing countries. The bank-oriented system of investment finance has traditionally been viewed as inherently problematic because of the risks associated with maturity transformation in a volatile economic environment. Such a system increases the vulnerability of firms to financial shocks since the cost and availability of bank credit often undergo sharp and unexpected changes. By contrast, capital markets are expected to provide firms with more predictable, longer-term finance, while secondary markets in securities accord savers liquidity. It is also often argued that they would exert better

financial discipline over firms through shareholder action and the threat of being taken over by other firms.

While there are often serious problems and weaknesses with a bank-oriented system in developing countries, the benefits claimed for a market-oriented system are unsubstantiated. It is often overlooked that the financial systems in Germany and Japan have not only proved to be remarkably stable, but also in the major respects discussed in sections III and IV are more efficient than the Anglo-American system. Historically, financial asset prices and interest rates in Germany and Japan have been less volatile than in the United States, bank deposits more stable, and financial disruptions and bank failures less frequent. Moreover, the cost of finance to industry has been much lower in Germany and, more particularly, in Japan. Evidence suggests that high capital costs have contributed to declining competitiveness in both industry and international banking in the United States. Lower capital costs and a more predictable supply of finance appear to have enabled Japanese firms to undertake longer-term projects, including investment in research and development, whereas United States firms have been deterred (McCauley and Zimmer, 1989; Poterba, 1991; Zimmer and McCauley, 1991)<sup>3</sup>.

One of the main reasons for the greater stability and efficiency of the financial systems in Germany and Japan is their ability to overcome the dilemma posed by modern capital markets. As noted by Keynes (1936, chap. 12), modern capital markets reconcile the social need for investment with the preference of individual investors for liquidity. This is a necessity since "if individual purchases of investment were rendered illiquid, this might seriously impede new investment". However, while secondary markets in securities accord savers liquidity, they also open up prospects for speculation whereby most of the players "are, in fact, largely concerned, not with making superior long-term forecasts of the probable yield of an investment over its whole life, but with foreseeing changes in the conven-

---

<sup>3</sup> In conformity with contemporary trends and in response to outside pressure, Japan has been undergoing a transition towards a market-based and open financial system, which is not easy to reconcile with the policy of cheap finance. There have been severe fluctuations in share prices, interest and exchange rates, and a tendency for the cost of finance to rise (Martin, 1992).



tional basis of valuation a short time ahead of the general public". Thus, these markets tend to operate like "casinos" where players speculate on the speculations of other players.

The pattern of shareholding and ownership that characterizes the German and the Japanese systems has allowed them largely to overcome this dilemma. The fact that banks and business groups with a long-term stake in the corporations hold the controlling interest means not only that secondary markets tend to be less active and volatile, but also that the managers do not need to pay much attention to how the market values their assets from day to day, and can concentrate instead on the long term. This also helps reduce liquidity preference and short-termism on the part of individual investors and portfolio managers.

The bank-oriented system can exert a different and more efficient financial discipline over enterprises than the market-oriented system. Banks in Germany and Japan (and banking groups) are often in a position to monitor the performance of management by direct access to information through their close and long-term relations with firms as shareholders and creditors, and to intervene when needed in order to prevent failure. By contrast, in the Anglo-American system of fragmented shareholding, individual investors have neither the means nor the incentive to monitor and control corporate management. In extreme cases, market discipline is exercised through hostile takeovers, but these are often disruptive and wasteful. More important, since markets tend to value the enterprise largely on the basis of short-term financial performance, the takeover threat creates pressures and incentives for the management to think short-term.

Furthermore, the internal capital market organized within banks and firms connected by cross shareholding also improves enterprise performance by reducing the borrower's risk by permitting economies of scale in collecting, processing, evaluating and disseminating information. For the same reason, there is less credit rationing in a bank-based system (Fama, 1985; Driscoll, 1991). Such a system also makes it possible to reduce considerably the lender's risk and the rate of interest, since it gives deposit holders the liquidity they seek with a smaller risk of capital uncertainty by pooling and institutionalizing the risk associated with individual investment projects, and by reducing erroneous investment decisions.

A financial system with a close interface between banks and corpora-

tions tends to lower the rate of return required by investors to undertake investment. The expected rate of return on investment must be high enough to cover both the borrower's risk and the rate of interest received by the lender. However, as noted above, the borrower's risk is an important determinant of the lender's risk. The effect of this duplication of the borrower's risk on the rate of interest can be reduced by increasing the degree of the lender's involvement in the borrower's investment and other managerial decisions, since the lender is then better able to assure himself that pure risk is being properly weighed by the borrower: indeed both components of the lender's risk (i.e. the moral risk and the pure risk) would disappear if the lender and the borrower were the same person. The bank-oriented system thus reduces the extent to which the borrower's risk is duplicated in the lender's risk and the interest rate, and, hence, lowers the cost of investment.

### **3. Requirements for an efficient bank-oriented system**

These are particularly important considerations to be taken into account in reforming the financial system in developing countries, where the cost of finance needs to be kept low and firms must be able to take the long view in order to succeed in "learning by doing". However, the experience of many developing countries shows that the concentration of ownership in the hands of inside investors and close relations between banks and corporations are not necessarily conducive to good enterprise performance and financial stability. Indeed, in many developing countries the equity control of corporations is in the hands of families or business groups, and interlocking ownership between corporations and banks is widespread. Such arrangements have often resulted in corruption, collusive behaviour, speculation and inefficiency. Moreover, financial instability and short-termism in bank and corporate behaviour are common features of these countries because a number of conditions essential for an efficient bank-oriented system are not always met.

First of all, for the reasons already explained, price stability is essential for a bank-oriented system. This calls for, above all, fiscal and monetary discipline and a viable and relatively stable external payments position. Prudential regulations and effective supervision are also essential in a bank-

oriented system. In particular, firms should not be allowed to own and control banking organizations, since this will transfer the elements of the safety net to them and burden the monetary authorities with tasks they cannot undertake (Corrigan, 1991). In the German system prudential limits on long-term lending and individual loans, capital adequacy requirements, and effective supervision of banks' risk exposure by an agency separate from the central bank play a central role.

One argument against market-oriented finance is that "competition in ownership is no substitute for competition in product markets" (Corbett and Mayer, 1991, p. 20). This is also true for the bank-oriented system; namely, it does not make up for lack of competition in the markets for goods and services. Thus, such a system too needs to be combined with policies depending on competition as a spur to efficiency. In those developing countries where the bank-oriented system with widespread interlocking ownership has failed, the markets for goods and services were generally highly oligopolistic and protected from competition. In contrast, in countries where corporations were encouraged and forced to compete in export markets, a similar financial organization made a major contribution to industrialization.

Finally, new firms should have access to finance, and entry into new lines of financial activity should not be impeded. This calls for some competition in the banking sector. However, competition policies should be designed to prevent monopoly power rather than to allow completely free entry into the banking sector and unlimited price competition among banks -practices that have often led to financial instability in both developed and developing countries. Furthermore, specialized banks for industrial development and controls over credit allocation can play an important role in providing finance to new entrants.

#### 4. Control and regulation of stock-markets

While reform efforts need to concentrate in these areas, it is also true that capital markets are a reality in a number of countries and they also need to be improved. While most developing countries regulate primary issues and stipulate a number of conditions regarding their size, maturity and redemption and disclosure of information, there is very little effective con-

trol over secondary markets. Irregularities such as insider trading and fraud are widespread and administrative capacity to undertake effective supervision weak.

Stock prices in many of the so-called emerging markets have been extremely erratic and subject to very large swings. By removing credit constraints, financial liberalization has often triggered an increase in speculative activity by institutions and individuals. In many such countries, increased speculative activity in the secondary market caused stock prices to rise before 1987 even faster than in most of the world's major stock-markets, and to fall, again far more than elsewhere, after October 1987 (Singh, 1992). Most of these markets have again shown large swings over the last few years.

Since the size of these markets is relatively small, the direct effects of sharp falls in stock prices on the economy are negligible. However, the state of expectations in the equities market influences the exchange rate and capital flows since, as discussed in the next section, these markets are open to foreigners and/or provide alternative investment for holders of foreign currency assets. Greater stability is thus essential to prevent destabilizing feedbacks between equity and currency markets.

One way of reducing volatility is through the so-called "circuit breakers" introduced in the United States after the October 1987 crash (Kupiec, 1991). These consist of predetermined price floors: when prices fall to the floor, trading is suspended for a predetermined period. Such measures can be particularly helpful in reducing intra-day bandwagon-type declines in stock prices. Another is through the financial transactions tax long advocated by Keynes (1936, pp. 160-161). Such a tax may help reduce speculative instability by deterring short-term trading, improve the efficiency of the stock-market and lengthen the time horizon of corporate managers (Stiglitz, 1989b; Summers and Summers, 1989).

Public or semi-public agencies with large holdings of securities can also play an important role in bringing greater stability to stock prices. For instance, in Turkey the agency dealing with privatization has operated both as a buyer and a seller in the market for the shares of privatized public companies, exerting a significant influence on prices, even though its objective has not been to stabilize the market. Institutional investors and particularly provident funds can both provide the Japanese/German

type of shareholding and control over enterprises, and help to attain greater stability.

## VII. EXTERNAL LIBERALIZATION AND FINANCIAL OPENNESS

Recent years have witnessed the increased integration of developing countries into the international financial system in large part due to widespread external financial liberalization. Most of these countries have also liberalized imports and increasingly relied on exports for growth, but the degree of internationalization of finance has gone much further than trade. Indeed in many countries the share of transactions with international characteristics in the financial sector is far greater than the share of trade in GDP.

### 1. The concept of financial openness

By external financial liberalization we mean policy actions that increase the degree of ease with which residents can acquire assets and liabilities denominated in foreign currencies and non-residents can operate in national financial markets, i.e. financial openness. Three broad types of transaction can be distinguished in this respect. First, **inward transactions**: allowing residents to borrow freely in international financial markets, and non-residents to invest freely in domestic financial markets. Second, **outward transactions**: allowing residents to transfer capital and to hold financial assets abroad, and non-residents to issue liabilities and to borrow in domestic financial markets. Third, **domestic transactions in foreign currencies**: allowing debtor-creditor relations among residents in foreign currencies such as bank deposits and lending in foreign currencies.

Our definition of financial openness is wider than capital account liberalization because it includes financial transactions among residents denominated in foreign currencies. These are an important part of banking and finance, and affect the national economy in much the same way as cross-border financial transactions (Bryant, 1987, chap. 3).

## 2. The extent of financial openness in developing countries

Widespread liberalization has occurred on all three fronts. Inward transactions are virtually free in a large number of countries, particularly in Latin America where external borrowing by the private sector, often via the intermediation of resident banks, is not subject to approval, except for capital market issues. Similarly, there are few restrictions on the access of non-resident investors to domestic capital markets. The debt crisis has played an important role in this respect: the "market-based menu" has generated new prospects for arbitrage and windfall profits and significantly raised the amount of equities and domestic-currency debt assets held by non-residents (UNCTAD, 1989, pp. 105-107). More recently, access of non-residents to national equity markets has been encouraged in the context of privatization programmes.

As for outward transactions, an increasing number of developing countries have adopted capital account convertibility in recent years -some to an extent not found in most industrialized countries. Liberalization of transactions among residents in foreign currency, however, has gone much further. Indeed, there has been a tendency to encourage residents to hold foreign exchange deposits with banks at home, increasing the importance of foreign currency in the economy, i.e. dollarization. The share of foreign currency in total deposits in recent years has reached 50 per cent in a number of developing countries in Latin America as well as in Asia (e.g. Philippines), the Middle East and Europe (e.g. Turkey and Yugoslavia). This figure is well above the levels found in some international financial centers such as London where the share of total bank claims (including inter-bank claims) on residents in foreign currencies barely exceeds 20 per cent (Bryant, 1987, chap. 3; Akyüz, 1992).

## 3. Nature of capital flows

The consequences of financial openness in developing countries have not been adequately treated in the literature primarily because this is a very recent phenomenon. Mainstream thinking is largely an extrapolation of "open economy macroeconomics" and treats the issue in the context of "sequencing of economic reforms". This literature emerged in large part from

an *ex post* attempt to explain why the Southern Cone liberalization experiment failed (Corbo *et al.*, 1986; Corbo and de Melo, 1987; Diaz-Alejandro, 1985; Dornbusch, 1983; Frankel, 1983; McKinnon, 1982). It takes it for granted that external financial liberalization is desirable on efficiency grounds: it is said to have positive effects on the level and allocation of investment, and these efficiency gains more than compensate for the loss of policy autonomy, i.e. reduced ability of governments to achieve national objectives by using the policy instruments at their disposal (Bryant, 1980, chap. 12).

According to this view, external financial liberalization may give rise to perverse results only if there are problems elsewhere in the economy -e.g. budget deficits, monetary instability, and distortions and imperfections in goods and labour markets. On the other hand, since it is not possible to correct these at once, external financial liberalization must be properly sequenced. Although it is sometimes argued (e.g. Krueger, 1984) that it may be difficult to control inflation without liberalizing the economy, the majority view is that domestic financial markets and the current account should be liberalized before the capital account, and that fiscal balance and monetary stability should be attained before any liberalization (Dornbusch, 1983; Edwards, 1984, 1987 and 1989; Fischer and Reisen, 1992; Frankel, 1983; McKinnon, 1982).

The benefits claimed for financial openness are generally based on the assumption that the internationalization of finance allows savings to be pooled and allocated globally through movement of capital across countries in response to opportunities for real investment, thereby improving the allocation of resources internationally and equalizing rates of return on investment everywhere. Accordingly, external financial liberalization in developing countries is expected to give rise to capital inflows, provided that it comes after domestic financial markets have been liberalized and interest rates raised. This is seen as a one-off phenomenon of adjustment of domestic interest rates to world levels as capital scarcity is reduced through an increase in the underlying capital flows.

However, the evidence strongly suggests that international capital flows do not in practice improve the international allocation of savings. There has been no narrowing of differences in rates of return on capital investment in the major industrial countries, or in real long-term interest

rates; nor has the link between the levels of savings and investment in individual countries been considerably weakened (UNCTAD, 1987; Kasman and Pigott, 1988; McCauley and Zimmer, 1989; Akyüz, 1992). The main reason is that most international financial transactions are portfolio decisions, largely by rentiers, rather than business decisions by entrepreneurs. The bulk of capital movements is motivated primarily by the prospect of short-term capital gains, rather than by real investment opportunities and considerations of long-term risk and return. The speculative element is capable of generating gyrations in exchange rates and financial asset prices by causing sudden reversals in capital flows for reasons unrelated to policies and/or the underlying fundamentals. Rather than penalizing inappropriate policies, capital flows can help to sustain them, as has been the case in recent years in the United States and Italy where inflows have helped to run chronic fiscal deficits.

Thus, financial openness tends to create **systemic** problems regardless of the order in which various markets are liberalized and distortions removed. The exposure to short-term, speculative capital flows is much greater for developing than for developed countries because their instability provides greater opportunities for quick, windfall profits on short-term capital movements while their ability to influence capital flows through monetary policy is much more limited.

While internal financial liberalization strengthens the link between inflation and interest rates, external financial liberalization (unlike trade liberalization) weakens that between inflation and the exchange rate, bringing the latter under the domination of capital flows instead of trade balances and the relative purchasing power of currencies: inflation differentials are more readily reflected in nominal interest rate differentials than in the movement of the nominal exchange rate. Thus, although short-term capital inflows motivated by the lure of quick, windfall profits are often associated with positive **real** interest rate differentials in favour of the recipient, such a differential is neither necessary nor sufficient in all cases. Capital inflows usually occur in response to a **nominal** interest rate differential that markets do not expect to be fully matched by a nominal exchange rate depreciation. Such differentials often emerge when domestic inflation is much higher than abroad and domestic financial markets have been liberalized. Since in many developing countries inflation rates close to those prevailing



in the major OECD countries are very difficult to attain, the scope for big arbitrage opportunities to emerge is much greater. Similarly, an expectation that equity prices will rise faster than domestic currency depreciation can prompt an inflow of capital. Both types of expectation can be self-fulfilling since the inflow of funds, if large enough, can itself maintain the value of the currency and boost equity prices.

Such inflows are typically initially a response to a favourable shift in market sentiment regarding the recipient country. This shift may result from external causes such as a sudden rise in export prices, or from internal ones such as reduced inflation, better growth prospects, and greater political stability and confidence in the government's policies. After the initial shift in market sentiment, a bandwagon develops and creates a speculative bubble where people are lending or investing simply because everybody else is doing so. The boom does not necessarily peter out smoothly: a recently liberalized, well-performing economy can suddenly find favour with foreign capital of all sorts, but if things go wrong for some reason, the capital can disappear just as rapidly. When the bubble bursts and the currency comes under pressure, even a very large positive real interest rate differential may be unable to check the capital outflow.

#### 4. Recent capital flows to Latin America

That was the story of the liberalization episodes in the Southern Cone in Latin America in the 1970s, when high domestic interest rates, overvalued exchange rates, freedom to borrow abroad and plentiful international liquidity combined to induce capital inflows. But there are strong signs that a similar process is again under way in a number of Latin American countries. It is estimated that the region as a whole received about US\$40 billion in 1991, three times the level of 1990, the main recipients being Mexico, Brazil, Argentina, Venezuela and Chile. Not all the capital inflows have been for short-term uses, but much of them do appear to have been, particularly in Argentina and Brazil (Griffith-Jones *et al.*, 1992, tables 4 and 5; UNCTAD 1992, part two, Annex II). In the majority of these countries capital inflows continued at an accelerated pace in 1992. In Chile where "the monetary authorities adopted a cautious approach based on the assumption that the oversupply of foreign exchange was only temporary and was due to

the unusually high price of copper and the low international interest rates" (ECLAC 1991, p. 41), short-term capital inflows slowed down considerably in 1992 thanks to various measures designed to reduce the arbitrage margin.

What is remarkable about recent capital inflows to Latin America is not only that the recipient countries are in very different positions compared to the 1970s, but that they differ widely among themselves with respect to inflation, fiscal posture, and exchange rate and trade policies. Argentina, Chile and Mexico have liberal trade regimes whereas Brazil has tight controls. While Brazil has had a large fiscal deficit and very high inflation, others, particularly Chile and Mexico, have had balanced budgets or fiscal surpluses, and moderate inflation. Capital has been attracted by a combination of currency appreciation and high real interest rates in Chile, Mexico and particularly Argentina (and also a booming stock-market in the latter two), but not in Brazil where the underlying factor has been very high real interest rates (about 4 to 5 per cent per month). Currency appreciation is due to exchange rate policy in Argentina (which uses the exchange rate as a nominal anchor to reduce inflation), but not in Chile and Mexico where it is market-generated. It has led to a considerable deterioration of the trade balance, especially in Argentina and Mexico.

The ideal response to such capital inflows is a corresponding increase in domestic investment in traded goods sectors. This not only prevents a sharp appreciation of the currency by raising capital goods imports, but can also enhance export capacity- something that may be needed especially when capital flows dry up or are reversed. But higher investment is not always possible when domestic interest rates are prohibitive and long-term investment with funds borrowed abroad at lower rates carries considerable exchange rate risk. In other words the high interest rates and/or currency appreciation that attract short-term capital also deter investment. In Latin America, capital inflows resulted in a sharp swing in the transfer of resources abroad by about 4 per cent of the region's GDP during 1990-1991, but investment remained depressed: in Brazil and Argentina the investment ratio remained below the levels of the 1980s when these countries had been making large transfers on debt servicing.

The problems of macroeconomic management in the face of a massive capital inflow are well known. Sterilizing them by issuing domestic debt

can impose a serious burden on the public sector, particularly when the arbitrage margin is large. In Brazil, for instance, the cost of carrying the extra US\$5 billion of reserves purchased in this way amounted to about US\$2 billion during 1991-1992, adding considerably to domestic public debt (UNCTAD, 1992, part two, Annex II; Junior, 1992). Furthermore, by increasing the stock of government debt, sterilization itself tends to raise domestic interest rates and, hence, the arbitrage margin. If, on the other hand, the currency is allowed to appreciate, it can undermine the competitiveness of the domestic industry, possibly eventually triggering a sharp reversal in short-term capital flows.

## 5. Opening stock-markets to non-residents

Instability in short-term capital flows combined with the inherent volatility of investment in company equity exposes the economy to even greater risks. Since opening up domestic capital markets requires some form of currency convertibility for non-resident equity investors, a close link can develop between stock and currency markets even in countries where the capital account is not fully open. This may prove to be a serious problem in Latin America because of the increased presence of non-residents in capital markets. In Mexico, for instance, equity holding by non-residents is estimated to have amounted to more than \$25 billion, or about a quarter of the market's capitalization in the second quarter of 1992 (*Latin American Economy and Business*, May 1992, p.4), compared to about 5 per cent in the major capital markets such as New York and Tokyo. The link between these two inherently unstable markets can be further strengthened by dollarization of the economy, when that occurs.

This link increases the potential for the emergence of foreign exchange and/or stock-market crises. Since the return on investment to the foreign investor depends largely on the movement of the exchange rate, a serious shock (e.g. a terms-of-trade deterioration) that makes a devaluation appear inevitable can trigger both a sharp decline in equity prices and an outflow of capital. Similarly, the mood in equity markets can exert a strong influence on the exchange rate -e.g. bullish expectations can trigger capital inflow, leading to appreciation. By contrast, a bearish mood in the capital market and/or massive profit-taking in dollars by non-residents can not

only prick the speculative bubble in the stockmarket, but also lead to a currency crisis. Recent evidence suggests that chaotic feedbacks between financial and currency markets can easily develop: for instance, when the bubble burst in the Tokyo stock exchange at the beginning of 1990, there was a massive shift out of yen-denominated assets, causing also considerable drops in the government bond index and the currency (Akyüz, 1992).

## **6. Effects of volatile capital flows on investment and trade**

One important consequence of sharp swings in the direction of capital flows and greater instability of exchange rates is to increase borrower's risk. For investors in traded goods sectors, the real exchange rate is the single most important relative price affecting profits. But firms in non-traded goods sectors are also affected, depending on the imported inputs they use. Exchange rate gyrations produce considerable uncertainty regarding prospective yields of investment. By raising the average rate of return required by investors to undertake investment, particularly in the traded goods sectors, this will depress the level of investment corresponding to any given rate of interest.

The influence of the exchange rate on investment decisions increases with the share of foreign trade in the economy. It is thus of growing importance in the developing world because of widespread import liberalization and emphasis on export-led growth. It is therefore ironic that the exchange rate is increasingly determined by purely financial forces delinked from trade and investment. Exchange-rate instability can thus undermine "outward oriented" strategies by depressing investment in exports. The evidence suggests that such adverse effects have occurred even in industrial countries, where firms are better equipped to hedge against unexpected swings in exchange rates, and that exchange rate stability has been characteristic of countries with sustained export growth (UNCTAD, 1987; UNCTAD, 1989, part one, chap. V).

The second systemic effect of volatile capital flows is through interest rates. As already noted, capital-value uncertainty and interest rates both rise as a result of increased borrower's risk as well as greater instability in interest rates and prices of financial assets, including equities, associated with volatile capital flows. More important, increased competition between

domestic currency and foreign currency assets also tends to raise the cost of finance because of the greater risk and uncertainty in developing countries. The fact that most developing countries are economically and politically less stable than developed countries, with financial and legal systems that are less able to ensure enforcement of contracts, increases the hazards of financial investment. In a financially closed economy the safety premium on foreign currency assets is counter-balanced by the high transaction costs of shifting into them, at least for most small savers, but financial openness reduces these costs considerably. Consequently, domestic assets need to carry much higher rates of return than external assets. This can reduce investment and impair competitiveness.

## 7. Controlling capital flows

Complete isolation of the financial system in a developing country from the rest of world is neither feasible nor desirable. Successful export performance requires close interaction of banks at home with world financial markets in order to provide trade-related credits and facilitate international payments. The ability to borrow in international capital markets allows diversification in corporate finance, while foreign investment in capital markets can help broaden their equity base and reduce their leverage. Foreign banks can bring greater competition in the provision of banking services, thereby reducing the intermediation margin and the cost of finance.

Nevertheless, most developing countries need to exercise considerable control over external capital flows in order to minimize their disruptive effects and gain greater policy autonomy to attain growth and stability. There are a number of techniques to control capital flows with different degrees of restrictions and effects that were widely used in industrial countries in the 1960s and 1970s (OECD, 1972, pp. 71-77; Fleming, 1973; Swidrowski, 1975; Swoboda, 1976; OECD, 1981; OECD, 1982). Quantitative measures to limit short-term capital inflows through banks include reserve requirements on foreign liabilities, limits on their net external or foreign-currency positions, or on gross external or foreign currency liabilities, and minimum holding periods and blocking of foreign deposits for such periods. Similarly a number of measures may be applied to restrict external borrowings by non-banks, including reserve requirements on their foreign

liabilities, and exchange controls such as prohibition of borrowing other than commercial or supplier credits received by importers, control on domestic foreign currency credits to domestic importers and exporters, and regulations regarding the timing of export and import settlements. Of these, limits on banks' net external or foreign currency positions and exchange controls regarding non-banks can also be applied to restrict outflows. Restrictions on interest payments on non-resident deposits and negative interest rates are also among the measures that can be used to deter capital inflows.

Taxes may also be used to reduce the arbitrage margin and discourage speculative capital flows. A tax designed to reduce interest differentials (like the interest-equalization tax used in the United States in the past to check outflows) can also be especially effective in checking capital inflows in developing countries where inflation and interest rate differentials with developed countries tend to be large. The tax rate can be used flexibly according to the behaviour of capital flows and the objective pursued. Similarly Keynes' proposal for a financial transactions tax may be extended to apply to international financial transactions in order to "throw some sand in the wheels" and "deter short-term financial round-trip excursions" (Tobin, 1978).

Finally, various restrictions may be introduced on the access of non-residents to capital markets. One common measure is to limit foreign ownership to approved country funds and allow transactions on such funds only among non-residents in order to control the flow of foreign funds in and out of the country via capital markets. This can be combined with the requirement that such funds be managed by local managers who are generally more amenable to "moral suasion" by the authorities.

It should be kept in mind that in several industrialized countries capital markets have been opened to non-residents only very recently. In Japan, for instance, they were largely closed until the 1984 agreement with the United States, and even in Europe, where an integrated financial market is seen as an important step in the completion of a single EEC market, restrictions on entry into capital markets still remain in a number of countries (e.g. France and Italy). Again, the Republic of Korea only recently opened up its capital market to non-residents, but restricted foreign acquisition to 10 per cent of total equity capital, and to 2 per cent in some strategic industries.

Some of these techniques have recently been used in Latin America in order to slow down short-term capital inflows. These include reserve requirements for foreign currency liabilities (Chile and Mexico), compulsory liquidity requirements on the short-term forex liabilities of commercial banks (Mexico), minimum holding periods (Chile), extension of the fiscal stamp tax to foreign credits (Chile), restrictions on company borrowing abroad through stock and bond issues (Brazil), and limits on the dollar amounts that banks can raise in deposits abroad as a proportion of their total deposits (Mexico). However, such measures have generally had only limited success. Governments are often very shy in applying effective controls for fear of fending off genuine, long-term capital and investment. This is certainly a legitimate concern, particularly in Latin America, after a decade-long foreign exchange strangulation. However, experience shows that capital controls might have to be introduced anyway if the process develops into a payments crisis and capital flight. It may be easier to restrict short-term inflows and prevent debt accumulation early on than to check capital flight in a crisis.

Controls on capital flows are not always effective when there are large arbitrage opportunities. It is thus important to bear in mind that price stability is vital for a financially open economy, since high inflation and wide interest rate differentials with reserve-currency areas often lead to large arbitrage opportunities and encourage unsustainable capital flows. Furthermore, exchange rate management plays an important role. Explicit or implicit exchange rate guarantees tend to reduce the risk involved in arbitrage and encourage capital flows. As noted above, this has been an important factor in attracting short-term capital to Argentina. In Chile, by contrast, "the monetary authorities moved to resist revaluation of the peso by introducing changes to create uncertainty concerning yields on short-term capital flows" (ECLAC, 1992, p. 40). These measures included the ending of the practice of advance announcement of devaluation of the peso, widening of the currency band, and linking the peso to a basket of currencies instead of the US dollar. They appear to have played an important role in slowing down short-term capital inflows and securing greater real exchange rate stability by introducing uncertainty regarding the movement of the exchange rate. In Mexico too the authorities widened the differential points for the peso-US dollar exchange rate to allow larger fluctuations, although its

effects on capital flows seem to have been limited (Banco de Mexico, 1992, p. 144).

Historical experience clearly shows that capital controls are no answer when the underlying policies are not sustainable. For instance, measures to control capital inflows are generally ineffective against capital flight stemming from economic and political instability. Moreover, it is important to bear in mind that capital controls are needed not in order to pursue inappropriate policies and exchange rates, but to minimize the disruptive effects of short-term capital flows and gain greater policy autonomy to attain growth and stability.

## VIII. CONCLUSIONS

The focus of financial policies in developing countries should be industrialization and stability. A common feature of all modern examples of industrialization is that they have all succeeded in making finance serve industry and trade, not the other way round. This has often necessitated a considerable amount of intervention and control over financial activities. On the other hand, despite widespread claims for efficiency of financial markets, financial liberalization in many countries in recent years has generated more costs than benefits. These have included persistent misalignment of prices of financial assets, resulting in inefficiencies in the allocation of resources; sharply increased short-term volatility of asset prices, resulting in greater uncertainty, shorter maturities and higher interest rates; excessive borrowing to finance speculative asset purchases and consumption, resulting in unsustainable stocks of debt, increased financial fragility and reduced household savings; and loss of autonomy in pursuing interest-rate and exchange-rate policies in accordance with the needs of trade and industry.

It is equally true that government intervention in finance has often been misguided, giving rise to inefficiency and waste. However, the appropriate response should be to reform the State and rationalize intervention rather than throw in the towel and simply "unleash market forces". The main challenge is to determine where and how governments should intervene and to make sure that the intervention achieves its aims. The discussions so far suggest the following:



- Macroeconomic stability is of cardinal importance for the stability and efficiency of the financial system, since excessive volatility of prices and economic activity tends to increase financial fragility, create uncertainty, raise interest rates and shorten the time horizon. While macroeconomic stability itself is influenced by financial policies, monetary and fiscal discipline is crucial.

- In cases where directed credits and financial subsidies are successfully used as part of industrial policy, winners are not picked by "bureaucrats", but through a process based on a close interaction between the government and the business and the use of market signals to assess risks and opportunities. Success also depends on ensuring reciprocity between support and performance; use of controls, regulations and subsidies for the intended purposes; and readiness to revise them as necessary.

- Financial policies must take account of the dual nature of interest rates: the **return** aspect, which primarily influences the distribution of asset holdings in different forms, and the **cost** aspect, which determines the capacity of the corporate sector to generate internal funds, to undertake investment and to compete in world markets. It is important to bear in mind that while high interest rates are not necessary to increase savings, low and stable capital cost is crucially important for investment and competitiveness.

- There is often a need for deposit ceilings and intervention in the money market in order to stabilize interest rates and asset prices and prevent excessive risk-taking and price competition in the financial sector. Such controls should be applied with flexibility and discretion, taking into account macroeconomic conditions as well as the needs of trade and investment. Rigid rules regarding the level of real interest rates are no more sensible than those about the rate of growth of money supply in the conduct of monetary policy.

- Prudential regulations and strong bank supervision are also essential to prevent excessive risk-taking and financing of speculative activities by banks. Measures such as capital requirements are not always enough to reduce fragility: it may also be necessary to act directly on the asset portfolios of banks and restrict lending against or investment in highly capital-uncertain assets such as securities and property, and exposure to a single firm. Firms should not be allowed to own and control banks. Protective

regulations such as deposit insurance and lender-of-last-resort facilities should only be introduced in combination with prudential regulations.

- Most developing countries need to concentrate their energies on strengthening their existing bank-based financial systems rather than pin their hope on transplanting Wall Street. They also need to promote long-term equity holding via institutional investors such as provident funds, and permit banks to hold equities within prudential limits. Transfer taxes and "circuit breakers" may be used to deter short-term trading and reduce volatility in stock markets. Easy access to stock-markets and readily available short-term financial instruments paying market returns tend to increase financial instability.

- Particular care needs to be given to the design of external financial policies since mistakes in this area tend to be very costly and difficult to reverse. Allowing residents uncontrolled access to international capital markets has proved damaging in many developing countries, and short-term speculative capital flows have proved extremely troublesome. Developing countries need to exercise a considerable degree of control over external capital flows through taxes, quantitative restrictions and exchange controls in order to minimize their adverse effects on macroeconomic equilibrium, exchange rates and trade; to control the pace of accumulation of external debt; and to gain greater autonomy in monetary policy. Access of non-residents to domestic capital markets should be restricted since close links between the two inherently volatile markets can be very dangerous. It is also important to resist the temptation to dollarize the economy in order to keep capital at home: policies should address the root cause of the problem and eliminate the reasons for extensive demand for foreign currency.

- A pragmatic not a doctrinaire approach is needed towards financial control and liberalization in developing countries. Restrictions on financial flows and interest rates may be removed over time as they fulfil their functions. Financial liberalization undertaken as a result of a successfully implemented industrial policy is very different from liberalization as a reaction to misguided and failed intervention. Has financial liberalization ever remedied stagnation and instability?

## REFERENCES

- AKYUZ, Y. (1990), "Financial System and Policies in Turkey in the 1980s", in T. Aricanli and D. Rodrik (eds.), *The Political Economy of Turkey. Debt, Adjustment and Sustainability*, London, Macmillan.
- AKYUZ, Y. (1991), "Financial Liberalization in Developing Countries: A Neo-Keynesian Approach", *UNCTAD Discussion Paper*, N° 36, March.
- AKYUZ, Y. (1992), "Financial Globalization and Instability", in Uner Kirdar (ed.), *Change: Threat or Opportunity?*, Vol. 3, *Market Change*, UNDP, New York.
- AKYUZ, Y. (1993), "On Financial Openness in Developing Countries", in *International Monetary and Financial Issues for the 1990s*, Volume II, UNCTAD, Geneva.
- AKYUZ, Y. (forthcoming), "Does Financial Liberalization Improve Trade Performance?", in D. Tussie and M. Agosin (eds.), *Trade and Growth: New Dilemmas in Trade Policy*
- AKYUZ, Y. (forthcoming), "Financial Policies for Industrialization and Development: Reflections on Financial 'Deepening' and 'Efficiency'", in M. Nissanke and A. Hewitt (eds.), *Economic Crisis in Developing Countries: New Perspective on Commodities, Trade and Finance*.
- AMSDEN, A. (1989), *Asia's Next Giant: South Korea and Late Industrialization*, OUP, New York.
- AMSDEN, A. and EUH, Yoon-Dae (1990), "Republic of Korea's Financial Reform: What are the Lessons?", *UNCTAD Discussion Paper*, N° 30, April.
- ARYEETEEY, E., ASANTE, Y., GOCKEL, F. and KYEI, A. (1990), "Mobilizing domestic savings for African development and industrialization: A Ghanaian case study", mimeo, Queen Elizabeth House, Oxford.
- BANCO DE MEXICO (1992), *The Mexican Economy 1992*, Mexico City.
- BLUNDELL-WIGNALL, A. and BROWNE, F. (1991), "Macroeconomic Consequences of Financial Liberalization: A summary Report", *Working Paper*, N° 98, OECD Dept. of Economics and Statistics, February.
- BRADFORD, C.I. (1986), "East Asian 'Models': Myths and Lessons", in J.P. Lewis and V. Kallab (eds.), *Development Strategies Reconsidered*, Overseas Development Council, N.J.

- BRYANT, R. (1980), *Money and Monetary Policy in Interdependent Nations*, The Brookings Institution, Washington, D.C.
- BRYANT, R. (1987), *International Financial Intermediation*, The Brookings Institution, Washington, D.C.
- CHIPETA, C. (1990), "Mobilizing domestic savings for African development and industrialization: A case study of Malawi", mimeo, Queen Elizabeth House, Oxford.
- CHO, Yoon-Je (1988), "The Effects of Financial Liberalization on the Efficiency of Credit Allocation: Some Evidence from Korea", *Journal of Development Economics*, Vol. 29.
- CHO, Yoon-Je and KHATKHATE, D. (1989), "Lessons of Financial Liberalization in Asia: A Comparative Study", *World Bank Discussion Paper*, N° 50.
- CORBETT, J. and MAYER, C.P. (1991), "Financial Reform in Eastern Europe: Progress with the Wrong Model", *CEPR Discussion Paper*, N° 603, September.
- CORBO, V. and de MELO, J. (1987), "Lessons from the Southern Cone Policy Reforms", *The World Bank Research Observer*, Vol. 2, N° 2.
- CORBO, V., de MELO, J. and TYBOUT, J. (1986), "What Went Wrong with the Recent Reforms in the Southern Cone?", *Economic Development and Cultural Change*, Vol. 34, N° 3.
- CORRIGAN, E.G. (1991), "The Banking-Commerce Controversy Revisited", *Federal Reserve Bank of New York Quarterly Bulletin*, Spring.
- CUTLER, D.M., POTERBA, J.M. and SUMMERS, L.H. (1990), "Speculative Dynamics", *NBER Working Paper*, N° 3242, January.
- DATTA-CHAUDHURI, M. (1990), "Market Failure and Government Failure", *Economic Perspectives*, Summer.
- DAVIS, E.P. (1993), *Debt, Financial Fragility and Systemic Risk*, Clarendon Press, Oxford.
- DIAZ-ALEJANDRO, C. (1985), "Good-Bye Financial Repression, Hello Financial Crash", *Journal of Development Economics*, Vol. 19(1-2).
- DORNBUSCH, R. (1983), "Panel Discussion on the Southern Cone", *IMF Staff Papers*, Vol. 30, N° 1.
- DORNBUSCH, R. and REYNOSO, A. (1989), "Financial Factors in Economic Development", *American Economic Review - Papers and Proceedings*, May.
- DRISCOLL, M. (1991), "Deregulation, Credit Rationing, Financial Fragility

- and Economic Performance", *Working Paper*, Nº 98, OECD Dept. of Economics and Statistics, February.
- ECLAC (1991-1992), *Economic Panorama of Latin America*, United Nations, Santiago.
- EDWARDS, S. (1984), "The Order of Liberalization of the Balance of Payments", *World Bank Staff Working Paper*, Nº 710.
- EDWARDS, S. (1987), "Sequencing Economic Liberalization in Developing Countries", *Finance and Development*, March.
- EDWARDS, S. (1989), "On the Sequencing of Structural Reforms", *OECD Working Paper*, Nº 70, September.
- FAMA, E.F. (1985), "What's Different About Banks?", *Journal of Monetary Economics*, Vol. 15, January.
- FISCHER, B. and REISEN, H. (1992), *Towards Capital Account Convertibility*, Policy Brief Nº 4, OECD Development Centre.
- FLEMING, J.M. (1973), "Problems of Disruptive International Capital Movements", in A.K. Swoboda (ed.), *Europe and the Evolution of the International Monetary System*, Sijthoff Leiden, Institut Universitaire de Hautes Etudes Internationales, Geneva.
- FRANKEL, J.A. (1983), "Panel Discussion on the Southern Cone", *IMF Staff Papers*, Vol. 30, Nº 1.
- GREENWALD, B. and STIGLITZ, J.E. (1986), "Externalities in Economies with Imperfect Information and Incomplete Markets", *Quarterly Journal of Economics*, 101(2).
- GRIFFITH-JONES, S., MARR, A. and RODRIGUEZ, A. (1992), "The Return of Private Capital to Latin America: The Facts, an Analytical Framework, and some Policy Issues", mimeo, June.
- HANHANSON, J.A. and NEAL, C.R. (1985), "Interest Rate Policies in Selected Developing Countries, 1970-1982", *World Bank Staff Working Papers*, Nº 753.
- HONOHAN, P. and ATIYAS, I. (1989), "Intersectoral Financial Flows in Developing Countries", *World Bank Working Paper*, Nº 164, March.
- JONES, D. and KING, K.K. (1992), "Implementation of Prompt Collective Action", paper presented to the meeting of technicians of Central Banks of the American Continent, Barbados, 16-20 November.
- JUNIOR, P.A. (1992), "Política Monetária E Ingresso de Divisas: O Caso Brasileiro Recente", paper presented to the meeting of the technicians

- of Central Banks of the American Continent, Barbados, 16-20 November.
- KASMAN, B. and PIGOTT, C. (1988), "Interest rate Divergence among the Major Industrial Nations", *Federal Reserve Bank of New York Quarterly Bulletin*, Autumn.
- KATO, K. *et al.* (1993), "Policy-Based Finance: The Experience of Postwar Japan", *Final Report to the World Bank*, The Japan Development Bank, January.
- KEYNES, J.M. (1936), *The General Theory of Employment, Interest and Money*, London, Macmillan.
- KREGEL, J.A. (1991), "Markets and Institutions in the Financing of Business", paper prepared for the Jerome Levy Institute Conference: Restructuring the Financial System for Economic Growth, 21-23 November, University of Bologna.
- KREGEL, J.A. (1993), "Financial Fragility and the Structure of Financial Markets", paper presented at the Allied Social Science Associations Meetings, Anaheim, California, 7 January.
- KRUEGER, A.O. (1984), "Problems of Liberalization", in A. Harberger (ed.), *World Economic Growth*, ISC Press, San Fransisco.
- KUPIEC, P. (1991), "Financial Liberalisation and International Trends in Stock, Corporate Bond and Foreign Exchange Market Volatilities", *Working Paper*, N° 94, OECD Dept. of Economics and Statistics, February.
- LEE, CHUNG, H. (1992), "The Government, Financial System, and Large Private Enterprises in the Economic Development of South Korea", *World Development*, Vol. 20, N° 2.
- LIM, J.Y. (1991), "The Philippine Financial Sector in the 1980s", *UNCTAD Discussion Paper*, N° 35, March.
- MASSAD C. and EYZAGUIRRE, N. (1990), *Ahorro y formacion de capital: Experiencias latinamericanos*, CEPAL, Santiago.
- MARTIN, P. (1992), "Not the time to gloat over Japan's shocks", *Financial Times*, 26 May.
- McCAULEY, R.N. and ZIMMER, S.A. (1989), "Explaining International Differences in the Cost of Capital", *Federal Reserve Bank of New York Quarterly Bulletin*, Summer.
- McKINNON, R.I. (1973), *Money and Capital in Economic Development*, Washington, D.C., The Brookings Institution.

- McKINNON, R.I. (1982), "The Order of Economic Liberalization: Lessons from Chile and Argentina", in K. Brunner and A. Meltzer (eds), *Economic Policy in a World of Change*, Netherlands.
- MILLER, M. and WELLER, P. (1991), "Financial Liberalisation, Asset Prices and Exchange Rates", *Working Paper*, N° 94, OECD Dept. of Economics and Statistics, February.
- MINSKY, H. (1982), *Inflation, Recession and Economic Policy*, Wheatsheaf, Armonk, New York.
- MINSKY, H. (1986), *Stabilizing an Unstable Economy*, Yale University Press, New Haven.
- MOLHO, L.E. (1986), "Interest Rates, Saving, and Investment in Developing Countries", *IMF Staff Papers*, Vol. 33, N° 1, March.
- MWEGA, F.M. (1990), "Mobilizing domestic savings for African development and industrialization: A case study of Kenya", mimeo, Queen Elizabeth House, Oxford.
- NISSANKE, M. (1990), "Mobilizing domestic resources for African development and diversification: Structural impediments in the formal financial system", mimeo, Queen Elizabeth House, Oxford.
- OECD (1972), *Economic Outlook*, N° 12, December.
- OECD (1981), *Controls on International Capital Movements: Experience with Controls on International Portfolio Operations in Shares and Bonds*, Paris.
- OECD (1982), *Controls on International Capital Movements: The Experience with Controls on International Financial Credits, Loans and Deposits*, Paris.
- OWEN, P.D. and SOLIS-FALLAS, O. (1989), "Unorganized Money Markets and 'Unproductive' Assets in the New Structuralist Critique of Financial Liberalization", *Journal of Development Economics*, Vol. 31.
- POTERBA, J.M. (1991), "Comparing the Cost of Capital in the United States and Japan: A Survey of Methods", *Federal Reserve Bank of New York Quarterly Review*, Winter.
- SHAW, E.S. (1973), *Financial Deepening in Economic Development*, New York, Oxford University Press.
- SINGH, A. (1992), "The Stock Market and Economic Development: Should Developing Countries Encourage Stock Markets?", *UNCTAD Discussion Paper*, N° 49, October.
- SOMEL, C. (1992), "Finance for Growth: Lessons From Japan", *UNCTAD Discussion Paper*, N° 44, July.

- STIGLITZ, J.E. and WEISS, A. (1981), "Credit Rationing in Markets with Imperfect Information", *American Economic Review*, June.
- STIGLITZ, J.E. (1989a), "Markets, Market Failures, and Development", *American Economic Review*, Papers and Proceedings, May.
- STIGLITZ, J.E. (1989b), "Using Tax Policy To Curb Speculative Short-Term Trading", *Journal of Financial Services Research*, Vol. 3, N° 3, December.
- SUMMERS, L.H. and SUMMERS, V.P. (1989), "When Financial Markets Work Too Well: A Cautious Case For a Securities Transactions Tax", *Journal of Financial Services Research*, Vol. 3, N° 3, December.
- SWIDROWSKI, J. (1975), *Exchange and Trade Controls*, Gower Press, Essex.
- SWOBODA, A.K. (ed.) (1976), *Capital Movements and their Control*, Sijthoff Leiden, Institut Universitaire de Hautes Etudes Internationales, Geneva.
- TOBIN, J. (1978), "A Proposal for International Monetary Reform", *The Eastern Economic Journal*, July/October.
- TOBIN, J. (1984), "On the Efficiency of the Financial System", *Lloyds Bank Review*, July.
- UNCTAD (1987), "The Exchange Rate System", in *International Monetary and Financial Issues for the Developing Countries*, United Nations, Geneva.
- UNCTAD (1989-1992), *Trade and Development Report*, United Nations, Geneva.
- WESTPHAL, L.E. (1990), "Industrial Policy in an Export-Propelled Economy: Lessons from South Korea's Experience", *Economic Perspectives*, Summer.
- WIJNBERGEN, S. van (1983), "Interest Rate Management in LDCs", *Journal of Monetary Economics*, Vol. 12, September.
- WORLD BANK (1989), *World Development Report*, Washington, D.C.
- ZIMMER, S.A. and McCAULEY, R.N. (1991), "Bank Cost of Capital and International Competitiveness", *Federal Reserve bank of New York Quarterly Bulletin*, Winter.



**EAST ASIAN FINANCIAL MARKETS:  
WHY SO MUCH (AND FAIRLY EFFECTIVE)  
GOVERNMENT INTERVENTION?**

Alice H. Amsden



## CONTENTS

INTRODUCTION .....	73
I. WHY SO MUCH GOVERNMENT INTERVENTION? .....	74
II. REPRESSION IN FINANCIAL MARKETS .....	76
III. DISCIPLINE OF BUSINESS .....	78
IV. THE GOVERNMENT'S ABILITY TO IMPOSE PERFORMANCE STANDARDS .....	79
1. The state autonomy .....	80
2. Financial system characteristics: The case of the Republic of Korea .....	81
V. KEEPING THE COSTS OF INVESTMENT FINANCE LOW: THE CASE OF THE REPUBLIC OF KOREA'S FINANCIAL REFORM .....	83
1. Interest Rates .....	83
2. Developing the stock market .....	84
3. Interest rates and savings .....	86
VI. CONCLUSIONS .....	88
ANNEX OF TABLES .....	89
REFERENCES .....	99



## INTRODUCTION

Because the economies of the Republic of Korea and Taiwan, Province of China, have grown so fast, their financial systems, and the reforms they underwent in the 1980s, have been objects of curiosity in other developing countries. This is especially the case since the financial systems of both countries have exhibited high degrees of repression. Although both systems were reformed in the 1980s they still deviate substantially from the free market model.

This paper has four purposes. The first is to explain why government intervention in financial markets has been so extensive, not just in the Republic of Korea and Taiwan, Province of China, but in the general case of countries that have industrialized "late". Late industrialization is defined here as a process of industrial development in countries without the competitive asset of pioneering technology, which was the hallmark of the First and Second Industrial Revolutions. The second purpose is to analyse why government intervention in financial markets in the Republic of Korea and Taiwan, Province of China, has worked relatively well. The third purpose is to review briefly the major characteristics of the financial system of the Republic of Korea. Finally, the paper makes some observations about Korean financial reform in the 1980s.

## I. WHY SO MUCH GOVERNMENT INTERVENTION?<sup>1</sup>

The basic Heckscher-Ohlin trade model assumes identical production functions in the same industry in all countries, but in reality more advanced economies may be more cost effective, even in industries with a high labour content, due to superior infrastructure in their operating setting, better management and workforce skills, as well as their store of tacit, nontransferable productivity and quality improvements. At least in the short run, the standard form of technology transfer - designs, blueprints and production equipment- or even a turnkey transfer, are usually insufficient to overcome the productivity gap. Under these conditions, relatively low wages do not translate into relatively low unit labour costs, and do not serve as an entrée into world markets.

Exchange rate devaluations may lower real wage costs in international markets. But currency depreciations are usually constrained by political and social conditions, workers' physiological intake requirements, and the need to import production inputs, including wage goods. Even after real currency devaluations in the 1960s in the Republic of Korea and Taiwan, Province of China, low wages were found to be an insufficient competitive advantage against Japanese competition notwithstanding the labour intensity of a leading sector like cotton textiles (see, for example, Amsden, 1989; Clark, 1987). Latin America in the 1980s demonstrated that it was impossible to lower real wages without triggering a wage response that led to serious price instability and general macroeconomic disorder in the form of volatile nominal and real interest rates, unpredictable foreign exchange rates, variable and large fiscal deficits, and stop-go growth (UNCTAD, 1989, chap. 4; Taylor, 1988).

In contrast with conventional arguments favouring specialization in labour-intensive industries, the doyen of institutional theories of late industrialization, Alexander Gerschenkron, views catching up as a process of 'revolutionary', 'eruptive' spurts, with backward countries promoting "those branches of industrial activities in which recent technological progress has been particularly rapid" (1962: 9-10). Leading American and German enter-

---

<sup>1</sup> Sections 2-5 (a) rely heavily on Hikino and Amsden (1993).

prises could and did leap-frog ahead of Britain in the most dynamic sectors such as chemicals and steel because British firms could not establish impenetrable international entry barriers in the nineteenth century.

By the twentieth century this strategy had become impractical for two reasons. First, over time the gap between the most and least advanced countries (or even the average developed and developing country) had grown far greater. The distance to the world economic frontier, measured as the ratio of GDP per capita of the most developed countries to the appropriate comparison, ranged from only 1.8 to 3.3 for the average backward European country at the end of the nineteenth century compared with 11.9 for the average developing country after the Second World War and 25.7 for the typical least developed country in the 1970s (Hikino and Amsden, 1993).

Second, with the rise of global enterprises possessing "organizational capabilities" based on a core technology (Chandler, 1990), Gerschenkron's idea of leaping to the world technological frontier was no longer feasible. The institutionalization of R&D in such enterprises allowed them to erect entry barriers around their proprietary technology, which kept newcomers out. The only economy in the twentieth century to attempt to leap-frog to the world technological frontier ended in failure, namely the former USSR, which was Gerschenkron's primary concern.

Gerschenkron conceived domestic enterprises in Europe as the agents of industrialization, but increasingly after the Second World War, the multinational firm came to be viewed in certain development theories as the agent capable of transferring technology to backward countries. By raising productivity there, the multinational supposedly precluded the need for government intervention. Whether in the role of exporter of labour-intensive manufactures (as in Taiwan, Province of China, and Puerto Rico), or developer of import substitution industries (as in Mexico and Brazil), the multinational firm was credited with nudging backward countries closer to world productivity standards.

Nevertheless, casting the multinational firm at the heart of the development drama has proved to be problematic in practice. Few developing countries after the Second World War have managed individually to attract significant amounts of foreign investment. Even in those Asian countries which the multinationals have patronized, investments from abroad have been found to amount to only a small fraction of aggregate capital require-

ments (Amsden, 1992). Foreign capital typically lags rather than leads industrial development and tends to flow to backward countries where industrialization has already started, and only then accelerates it (Herman, 1991). Moreover, simply because a foreign investor is a multinational firm no longer necessarily implies that it operates at the world frontier. The production and design problems that afflict it at home may merely be transferred abroad -as in the case of the South American operations of some North American automobile companies (Shapiro, forthcoming). Thus, the multinational firm cannot be counted on automatically to overcome the diseconomies of backwardness mentioned above.

In sum, conventional development theory recommends that latecomers industrialize by "getting the prices right" (allowing supply and demand to determine prices), and typically by using low wages to gain a comparative advantage in labour-intensive industries. But, in fact, successful late industrialization has been a process of using subsidies to lower production costs, such as capital, to get the prices "wrong" (preventing market forces from determining prices, such as interest rates) in order to overcome the handicap of an absence of proprietary technology, the inability to leapfrog over more advanced countries, and the inadequacy of a low wage advantage (Amsden, 1989; 1992). Therefore, a necessary condition for industrializing in the twentieth century is systematic and well-coordinated government intervention to promote manufacturing investment. As suggested below, what seems to distinguish developing countries that are "sneaking up" to the world technological frontier from those that are "stumbling back" (such as the Philippines and Argentina) or "staying behind" (say, Bangladesh and Pakistan) is not less state intervention but rather a different set of principles governing subsidy allocation.

## II. REPRESSION IN FINANCIAL MARKETS

Even in the classic economic liberalism of the First Industrial Revolution in England, the Government played a positive and significant role (Coats, 1971; Taylor, 1972). Starting from the late eighteenth century, governments were actively involved in developing transportation, communications, and all sorts of education as well as stable banking systems and legal and



administrative frameworks generally. Over time, more direct microeconomic intervention that affected price competition increased everywhere to the extent that tariff protection to infant and other industries became widespread for a host of reasons related not just to industrial development but also to revenue and politics (Nye, 1991). Ideology aside, *laissez-faire* simply never existed (Lively, 1955; Goodrich, 1967; Hughes, 1991). As Maddison has observed: "Before 1913, government intervention had a similar flavour almost everywhere" (1989: 108).

Nevertheless, given a lack of competitive assets, late-industrializing states in the twentieth century did all this and much more, examples being Brazil, Turkey, India, the Republic of Korea, Taiwan, Province of China, and Japan, but because Japan was relatively less developed, it could do less than later industrializers. A case in point relates to financial markets, where state intervention went much further than even Alexander Gerschenkron envisioned. In the absence of highly developed banking institutions, Gerschenkron recognized the need for governments to arrange finance for manufacturing investments. But late-industrializing governments have not only made finance available, they have also targeted capital to specific firms as well as selected industries on highly concessionary terms.

In Taiwan, Province of China, for example, a market-determined interest rate could be said to have been approximated in the 1960s, 1970s and 1980s by the "curb market" interest rate. The curb rate was not determined in perfect competition because there were large, wholesale lenders, but it was still quite competitively established. Below the equilibrium curb market rate was the rate set by the government-owned commercial banks. These banks were habitually getting the interest rate "wrong", as evidenced by the fact that the commercial bank rate was consistently below the curb rate, often for one and the same borrower. Moreover, the nominal interest rate paid by the big firms that received commercial bank credit was higher than their effective interest rate because they on-lent to smaller firms at higher prices (Biggs, 1988).

After the Republic of Korea's financial "liberalization" of the 1980s, the "right" price of capital may be said to have been approximated by the interest rate in the secondary short-term government bond market. The misnomer of "liberalization" is indicated by the fact that, whereas in May 1989 the interest rate in this market was 18.9 per cent, the loan interest

rate of government-controlled commercial banks was only 12.5 per cent (Amsden and Euh, 1993). Obviously, commercial bank credit was still being subsidized even after "liberalization". The Republic of Korea had a three-tier financial structure for the first 25 years of its development. It was characterized by a curb market interest rate, a commercial bank rate, and a rate on foreign loans. Due to inflation and the relative constancy of the exchange rate, the real interest rate on foreign loans was negative throughout most of this period (Park, 1985). Not all three different prices that existed side by side in the Republic of Korea's capital market could have been right, and the negative real interest rate on foreign loans was fundamentally "wrong" in a capital-scarce country.

Even Thailand, with its reputation for economic liberalism, had positive real interest rates for only 24 out of 52 quarters between 1970 and 1982. A World Bank study called this performance "quite respectable in comparison with most developing countries" (Hanson and Neal, 1984: annex 6,3).

### III. DISCIPLINE OF BUSINESS

In comparing the behaviour of more and less economically- successful late industrializers that are "sneaking up" closer to the world frontier with those that are "stumbling back" or just "staying behind", an important difference between them lies in their management of the subsidy allocation process. Slow-growing late industrializers have tended to blanket business with subsidies without being willing or able to extract concrete performance standards in exchange. By contrast, fast-growing late industrializers have generally succeeded in disciplining subsidy recipients, imposing strict and monitorable performance standards on them (Amsden, 1989; 1991a; 1992). In imposing performance standards on business, the government also subjected itself to evaluation by objective criteria.

In the case of Taiwan, Province of China, subsidies to exporters in the 1960s were tied to targets administered by industry associations that were overseen by government agencies. These associations acted as cartels. They collected dues from members out of which bonuses to exporters were paid. Firms were allocated export targets and penalized if they fell short of their targets (Haggard, 1990; Wade, 1990). Loan officers of Taiwan, Pro-

vince of China's State-owned banks were also held personally responsible (in terms of pay and promotion) for the credit they allocated. Consequently, they were both conservative in their lending policies -lending only to relatively large firms- and careful in their monitoring of how effectively borrowers used their credit (Biggs, 1988).

While "infant industry protection", as conceived in the nineteenth century, was in theory a one-shot deal, designed to enable a new enterprise to reach a minimum efficient scale of operation, subsidization in late industrialization has in practice been multi-stage. It has operated not just at the start but also at later points in an economy's catch-up trajectory. For instance, the Taiwan, Province of China's machine tool industry received little government support in its early growth phase, but was subsidized subsequently to help it acquire financially troubled United States machine tool companies and move up into a higher quality market niche (Amsden, 1977; OECD, 1990). Ironically, the United States machine tool industry was also receiving government subsidies at the same time as the Taiwan, Province of China's machine tool industry was receiving them, but with no performance standards attached (Amsden, 1991b). By the 1990s the Taiwan, Province of China's Government was making preferential treatment of business depend on whether the firm in question met conditions related to R&D spending, personnel training, and even environmental protection standards (Dahlman and Sananikone, 1990).

Thus, subsidies in the slow-growing late-industrializing countries have tended to be allocated according to the principle of "giveaway" whereas in the fast-growing ones they have tended to be allocated according to the principle of reciprocity. In both cases the government has disciplined labour. What distinguishes the East Asian countries is that the government has also disciplined capital.

#### IV. THE GOVERNMENT'S ABILITY TO IMPOSE PERFORMANCE STANDARDS

The factors underlying the ability of the East Asian States to impose performance standards on business have operated at different layers of complexity.

## 1. The state autonomy

Imposing performance standards on business in exchange for subsidies in the early phase of industrialization requires a critical degree of "autonomy" on the state's part. This autonomy is influenced by the political power of private economic interest groups, whose strength and cohesiveness, in turn, seem to depend upon: (a) the level of development of the manufacturing sector; and (b) income distribution. What made it possible for the East Asian states to discipline business was the relative weakness of both manufacturing and agrarian interest groups at the outset of postwar industrial development.

Asia's manufacturing sector, except for Japan's, was extremely underdeveloped after the war even by the standards of other backward countries. According to two indicators of manufacturing development presented in table 1 -the ratio of manufacturing to agricultural net product and the net value of manufacturing per capita- East Asia's manufacturing sector in 1955 was much less advanced than Latin America's (the backwardness of India's manufacturing sector is exaggerated due to India's huge agrarian population). Owing to their weakness, East Asian manufacturing enterprises became dependent on state support to achieve a growth spurt, and had fewer of their own institutions than Latin American business to shield them from state interference.

Second, East Asian income tended to be more equally distributed than Latin American income (see table 2). Assuming that unequal income distribution implies access to a disproportionate share of resources by small groups in agriculture or industry, the more concentrated economic power is, the more these groups can both by-pass state sources of investment finance and buy government favours. Japan, the Republic of Korea and Taiwan, Province of China, all underwent a land reform in the late 1940s during which time their agrarian aristocracies were expropriated. With a manufacturing sector only in its infancy, and an agrarian sector devoid of powerful interest groups, the challenge to state authority remained weak. The Philippines represents the outstanding Asian exception to sustained growth, and it has regressed economically, bearing the burden of a highly unequal income distribution.

## 2. Financial system characteristics: The case of the Republic of Korea<sup>2</sup>

Another set of historically-specific factors influencing the East Asian state's ability to discipline business relates to the character of financial institutions. All major financial institutions under Japanese colonialism (which emerged in the Republic of Korea and Taiwan, Province of China, before the turn of the century and endured until the end of the Second World War) were state-owned, and commercial banks continued to be state-owned after independence. The ownership and control of commercial banks gave the postwar state in the Republic of Korea and Taiwan, Province of China control over investment finance (including foreign borrowing) and hence enormous leverage over borrowers.

Over time, all institutions of the Republic of Korea's financial system have been unified under one regulatory umbrella, the Ministry of Finance, so that the parts and the whole of the system can act in concert. Political leaders have come and gone in the Republic of Korea since the 1950s, and Korean students have returned from the United States brandishing first Keynesian and now monetarist theories, but there has been some continuity in the way the Korean "State" has managed financial activities. Such consistency has arisen from the professionalism and high calibre of the bureaucracy in the Ministry of Finance, which recruits its officials from the elite universities on the basis of a gruelling civil service exam<sup>3</sup>. Up until the present, virtually no bureaucrats in the Ministry of Finance (except politically-appointed Ministers) had been educated outside the Republic of Korea (aside from short-term courses). Such bureaucrats consult and possibly respect the importance of the free market theories of United States-trained economists, but they do not necessarily implement them, which is one reason for the yawning gap between what the Republic of Korea's financial system is said to be and what it actually is.

<sup>2</sup> Sections 5(b)-6(c) rely heavily on Amsden and Euh (1990 and 1993).

<sup>3</sup> Tokyo National University, Seoul National University and Taiwan National University (the last two in emulation of the first), were all founded with the purpose of supplying educated government officials, all of whom had to pass a "high" civil service exam. In general, all three East Asian countries have invested heavily in education, and this has undoubtedly contributed to the efficiency of the bureaucracy.

The financial system has incorporated an intangible set of dependencies, power relationships, and informal understandings that lends flexibility to the management of political and economic contingencies and variabilities in the environment. Informality has been instrumental in providing government officials with levers to discipline big business and other recipients of state support.

Before the 1980s, the government prohibited a myriad of financial practices; since the 1980s, it is more likely to prevent them. At one time, everything was prohibited except what the government allowed. Since then, all is allowed that is not prohibited. In addition to political pressures, this change reflects the demands which a more complex economy places on the financial system in terms of flexibility: the need for greater flexibility to meet unforeseen contingencies is best handled by informal understandings and mutual dependencies rather than formal rules. The shift from prohibition to prevention hinges more on informal than formal methods of government intervention.

Since 1988 the monetary authorities have prevented interest rates from rising too high -in both commercial banks and non-bank financial institutions (NBFIs)- by means of "window guidance": for instance, a Bureau Chief in the Ministry of Finance will call the President of a bank, finance or trust company, and/or officials of associations of financial institutions and provide "advice" on both deposit and loan rates.

The Ministry of Finance has several means at its disposal to make "window guidance" binding. In the case of commercial banks, which were privatized in the early 1980s, the MOF (and not shareholders) still influences the appointment of officers, privatization notwithstanding. The appointment of directors is enforced a fortiori in the case of specialized banks, which have not been privatized and which account for roughly 20 per cent of total financial assets (see table 3). In the case of non-bank financial institutions, which have always been private, the MOF's leverage over interest rates hinges on its power: (i) to regulate these institution's financial portfolios by setting limits on the amount of funds they can invest in, say, real estate, stocks, and bonds; (ii) to regulate their size, by deciding whether they may increase their paid-in capital (previously the MOF had control over the ability of NBFIs to create new branches); (iii) to order the Superintendent of Banks or another regulatory agency comparable to

the United States Securities and Exchange Commission to investigate a financial institution for "irregularities"; and (iv) to control the ability of NBFIs to refinance through the Bank of Korea, which the MOF governs.

## V. KEEPING THE COSTS OF INVESTMENT FINANCE LOW: THE CASE OF THE REPUBLIC OF KOREA'S FINANCIAL REFORMS

### 1. Interest rates

Whether before or after reform, Korea's Ministry of Finance (MOF) has had as one of its objectives lowering the level of financial costs for an ever-increasing circle of firms. One consideration that has guided the Ministry of Finance is that low interest rates are necessary to stimulate investment, while high interest rates are not as necessary to mobilize savings.

In December 1988 the monetary authorities became serious about reform and, as part of a sweeping financial reform, deregulated interest rates on bank loans and discounts, and on the rates of both short-term and long-term financial markets. After December 1988 the MOF was no longer empowered to set ceilings on interest rates (which, in a repressed financial market, had become actual rates) or to earmark subsidized credit for special borrowers.

A brief example suffices to substantiate the continuation of the MOF's informal interventions. In May 1989, the interest rate in the secondary short-term government bond market (special law bonds), which is a close approximation to a free market rate, was 18.9 percent. The loan interest rate of commercial banks was only 12.5 percent. This represents a big gap between the two markets and is therefore evidence against the liberalization of interest rates which, in theory, occurred from 5 December 1988 onwards.

The only interference by government in loan allocation in the Republic of Korea that is supposed to continue to exist is in relation to small and medium-sized firms: all financial institutions, even branches of foreign banks operating in the Republic of Korea, are required to set aside a certain portion of their loans for small and medium-sized enterprises, since even foreign banks, which were always free to choose their clients, tended to slight such firms in the past. In practice, the MOF determines to which firms financial

institutions may lend long term. Targeted industries receive preferential credit in the form of access to bank loans which, as noted above, carry below-market interest rates, if not the super preferential rates they once carried. The government has also acted to help targeted industries by other means, for instance, by developing plant sites for them near Seoul, where land is expensive but labour prefers to live; by providing tax breaks for R&D; and by financing joint ventures in R&D between business and government.

Thus, despite liberalization in the 1980s, the government of the Republic of Korea continues to provide subsidized credit to special customers. Nevertheless, the principal means by which the government has tried to reduce the costs of finance have come from outside the banking system.

## 2. Developing the stock market

Instead of liberalizing (raising) the interest rates of commercial banks to mobilize domestic savings (and thereby reduce reliance on foreign loans), the government has also attempted to provide both attractive outlets for savers and cheap finance for investors by expanding the stock market. The government has also attempted to expand the stock market to diffuse the wealth of the "chaebol" (big diversified business groups) through greater public ownership.

In 1980, price-earnings ratios in the Republic of Korea averaged 3 (compared to 8 in the United States and 20 in Japan). The cost of finance through the issuance of stocks was therefore 33 per cent. In 1989, such ratios averaged 14, which meant that the cost of finance had fallen to 7.1 per cent. Euh and Baker (1990) estimate that equity financing in 1989 cost only 3 per cent, in terms of cash flow, even considering tax effects, as dividend yields were only 2 per cent versus 12.5 per cent for preferential commercial bank loans.

Price-earnings ratios have risen in the Republic of Korea in response to general prosperity -a current account surplus provided unprecedented liquidity- and government plans to develop the capital market. Prices also responded to the performance of the Korea Fund, and other open-end type investment trusts sanctioned by the government, which enabled foreigners to invest indirectly in the Korea Stock Exchange (KSE). The Fund, amount-



ing to US \$60 million, was established in May 1984. It aimed at long-term capital appreciation through investment primarily in equity securities of Korean companies. It soon traded at a 100 per cent premium, driving up the price of a wide range of shares traded on the KSE.

The government intervened on both the supply and demand sides to deepen the stock exchange. The Ministry of Finance drew big companies into the capital market as suppliers of stocks and bonds by preventing them from borrowing overseas. Ceilings on debt-equity ratios were also enforced by closing a loophole whereby business groups tried to evade debt-equity ceilings by cross-holding stocks of affiliated companies. Such ceilings have represented a far-reaching form of government intervention in the affairs of business by international standards. The MOF began to enforce debt-equity ceilings and thereby reduce the financial instability of big business and increase the supply of corporate stocks and bonds for sale. A regulation that required share issues to be offered at par was rescinded (with a notable exception, which will be discussed below). By the late 1980s, real interest rates in the Republic of Korea were roughly three times higher than international rates, once an appreciation of the Korean won is taken into account (see table 4). This made it even more advantageous for firms to acquire finance on the capital market by issuing bonds or stocks than by borrowing from the banks.

The number of companies listed on the Korean Stock Exchange rose from 342 in 1985 to 669 at the end of 1990 (see table 5), and the number of shares traded rose from 0.8 billion to 3.2 billion. On a cumulative basis, indirect bank finance remained more important in the Republic of Korea than direct equity and bond finance, as in almost every developed and developing country except the United States. On an annual basis, however, indirect finance became less important than direct finance in the late 1980s (see table 6).

On the demand side, government measures to deepen the stock market had a dual objective: to mobilize savings and speculative funds by raising demand for securities, and to spread stock ownership among the lower income earners of the population. In addition to providing tax breaks and opening investment trusts for foreigners, demand-side measures have included the following: first, the MOF has aimed to enhance the integrity and trustworthiness of the capital market. Government guarantees of cor-

porate bonds, introduced in 1972, have continued. Stocks have been divided into two tiers, blue chips and more risky issues. A country-wide drive has attempted to educate the ordinary investor. Measures have been considered by the government to reduce insider trading and improve disclosure.

Second, stock market institutions themselves have been strengthened, partly in anticipation of the opening of the Republic of Korea's capital market to foreign investors and securities companies. The MOF allowed Korean securities companies to increase their paid-in capital by a multiple of 7 in a four-year period. An attempt has also been made to increase participation on the KSE of institutional investors by allowing non-bank financial institutions to hold securities in their portfolios. The ownership structures of life insurance companies and securities dealers themselves have been amended to encompass ownership of corporate equities and bonds. At the end of 1990, institutional investors accounted for 46 per cent of outstanding shares, a lower proportion than in most advanced countries but a far higher one than five years earlier (Securities Supervisory Board, 1992).

Third, to spread "people's capitalism", the government allowed 5 per cent of a company's new issues of stocks or debentures to be reserved for its employees for sale at par rather than market value. Directors and executives were not allowed to be included in the scheme. Some finance companies were successful in establishing such a programme, and since they had a relatively high level of paid-in capital and few employees, the gains to any individual employee sometimes reached US\$20,000. This stimulated demands by workers in other companies for the establishment of similar schemes, demands that were sometimes supported by strikes. By 1990 Employee Stock Ownership Associations covered some 945,600 workers in 784 companies. The total number of shareholders was roughly 10.4 million people out of a population of about 42 million.

### 3. Interest rates and savings

In the 1980s, credit continued to be allocated preferentially, but real deposit rates rose as did savings. Whereas real savings deposit interest rates were negative through most of the 1970s, they became positive in the 1980s, reaching a peak of 7.3 per cent in 1986 (see table 7). Nevertheless, there

does not appear to be any simple relationship in the Republic of Korea between interest rates and savings.

Table 8 provides data on national and household savings rates, expressed as percentages of GNP. What is evident is that the rising trend of rates of saving began well before the onset of liberalization and low inflation rates. In 1978-1979, when inflation was high and real savings deposit interest rates were negative during the big push into heavy industry, the ratio of national saving to GNP reached 28 per cent. This almost equalled the savings rate of 1984-1985 (29 per cent), when inflation was down and the era of positive real interest rates had dawned (see table 8). Savings rates jumped in the late 1980s, but this coincided with a surplus in the current account of the balance of payments. By definition, therefore, savings rose.

Any postulation of a simple relationship between real interest rates and savings is further discredited by econometric exercises suggesting that the two variables are weakly and insignificantly correlated with one another in the Republic of Korea, whether savings are defined at the national or household level (Han, 1988; Yu, 1988). If simple explanations are preferred, then income is a better explanator of savings behavior than real interest rates, a finding for the Republic of Korea that is in keeping with more general observations for developing countries. Khatkhate (1988) reports that in a wide range of developing countries, "the level of the real interest rate by itself has little or no impact on the selected macroeconomic variables" (p. 577, emphasis added).

The message seems to be that savings behaviour must be understood in a wider policy-making and socio-economic context than merely interest rate determination. The econometric findings in the Republic of Korea of a weak relationship between savings and real interest rates open the door to the possibility that savings in the 1980s were influenced by opportunities for capital gains in the stock market, and by an increased demand for housing, both induced by rising incomes. Housing as a share in total urban household expenditure rose from 14 per cent in 1965 to 17 per cent in 1975 and to 27 per cent in 1985 (Song, 1991). The demand for housing may be expected to raise the savings rate insofar as the Republic of Korea's financial sector still does not provide mortgage loans.

## VI. CONCLUSIONS

Without the competitive asset of new products and processes, late-industrializing countries have found it difficult to propel themselves into the league of international competitors on the exclusive basis of a low-wage advantage. Even in their leading sector in the 1960s (cotton spinning and weaving), and notwithstanding their relatively modern physical and human infrastructure achieved by dint of United States aid, the Republic of Korea and Taiwan, Province of China, still could not compete on quality and price using market-determined production costs against the higher productivity of Japanese textile manufacturers. Government intervention in financial markets, therefore, has been oriented towards lowering costs, especially of capital, by subsidizing interest rates.

The Governments of both the Republic of Korea and Taiwan, Province of China, have intervened fairly effectively, as measured by aggregate rates of productivity and output growth, because they instituted a principle to guide subsidy allocation that differed from that of slower-growing late-industrializing countries. In the two countries, subsidies have tended to be allocated to business according to the principle of reciprocity, in exchange for concrete and monitorable performance standards, whereas in slower-growing countries they have tended to be allocated without strings attached.

In the 1980s, both countries (the focus of this paper) reformed their financial systems by making them more competitive, but the Ministry of Finance continued to coordinate financial market institutions and to introduce measures to keep credit artificially cheap for selected firms. Interest rates in the 1980s were not deregulated, but the major method employed by the government to create cheap credit was largely institutional: it introduced a series of measures to strengthen the stock market.

The Republic of Korea has achieved its objective of modernizing its financial sector, therefore, principally by creating institutions or remodeling old ones, not by relying exclusively on market forces to achieve desired goals. Sometimes new institutions have liberated market forces, but at other times they have repressed them. To achieve similar goals, other countries wishing to follow the Republic of Korea's experience would have to create equivalent, if different, institutions, but not assume that goals are achievable merely by letting the forces of supply and demand operate freely.

## **ANNEX OF TABLES**



Table 1  
**RATIO OF MANUFACTURING TO AGRICULTURAL NET PRODUCT  
 AND NET VALUE OF MANUFACTURING PER CAPITA,  
 LATIN AMERICA AND ASIA, 1955**

Country	Ratio of manufacturing to net agricultural product	Net value of manu- facturing per head (US\$)
Latin America		
Argentina	1.32	145
Brazil	0.72	50
Chile	1.35	75
Colombia	0.42	45
Mexico	1.00	60
Peru	0.52	25
Venezuela	1.43	95
Asia		
India	0.30	7
Indonesia	0.20	10
Republic of Korea	0.20	8
Philippines	0.32	13
Thailand	0.28	10

Source: Alfred Maizels, *Industrial Growth and World Trade*, (Cambridge: At the University Press, 1963), as cited in Christopher Freeman, "Catching up in world growth and world trade," (mimeo), Science Policy Research Unit, Sussex University, United Kingdom

Table 2  
 INCOME DISTRIBUTION (THE RATIO BY WHICH THE INCOME  
 OF THE TOP FIFTH OF THE POPULATION EXCEEDS THAT OF  
 THE BOTTOM FIFTH)

Country/territory	Year	Ratio
Asia		
East Asia		
Hong Kong	1981	12.1
Japan	1979	4.0
Korea, Republic of (a)	1981	4.9
Southeast Asia		
Taiwan, Province of China (b)	-	4.3
Indonesia (c)	1983	11.9
Philippines	1971	16.1
Singapore	1977-78	7.5
South Asia		
Thailand	1975-76	11.2
Bangladesh	1976-77	7.6
India	1975-76	10.1
Latin America		
South America		
Brazil	1982	27.7
Central America		
Dominican Republic (d)	1976-77	12.5
El Salvador (d)	1976-77	8.6
Guatemala	1979-81	10.6
Mexico (d)	1977	15.4

(a) Urban only (data for other countries are national).

(b) Statistic reported in Kuo-Ting Li, *The Evolution of Policy Behind Taiwan's Development Success* (New Haven: Yale University Press, 1988).

(c) Rural only, as reported in Alan Gelb and associates, *Oil Windfalls: Blessing or Curse?*, New York, Oxford University Press, 1988.

(d) Based on available rather than total households, which tends to bias estimates of inequality downwards.

Source: (all countries and territories except Taiwan, Province of China, and Indonesia): National survey data reported in United Nations, "Special study", *National Accounts Statistics*, (New York: 1985).



Table 3  
**DEPOSITS BY TYPES OF INSTITUTIONS**  
 (end of year - billion won, %) (a)

	1975	1980	1985	1990	1991
Banking Institutions	2,779.2	12,421.8	31,022.7	84,054.1	98,507.9
(Deposit money banks)	(b) (78.9)	(70.4)	(53.7)	(41.2)	(40.1)
Commercial banks	1,923.3	7,752.1	18,157.0	51,174.6	59,494.9
	(54.6)	(43.8)	(31.4)	(25.1)	(24.2)
Specialized banks	855.9	4,669.7	12,865.7	32,879.5	39,013.0
	(24.3)	(26.4)	(22.3)	(16.1)	(15.9)
Nonbank financial institutions	743.5	5,281.4	26,780.2	120,078.1	146,918.6
	(21.1)	(29.8)	(46.3)	(58.8)	(59.9)
Development institutions	28.8	144.8	227.2	1,773.8	2,281.1
	(0.8)	(0.8)	(0.4)	(1.5)	(0.9)
- Korea Development Bank	28.8	135.8	198.5	846.0	860.3
- Korea Long-Term Credit Bank	-	9.0	28.7	927.8	1,420.8
Investment companies	195.3	1,771.9	9,552.6	33,964.0	25,120.3
	(5.5)	(10.0)	(16.5)	(28.3)	(14.3)
- Investment and Finance Co.	180.5	902.0	3,238.6	8,575.3	7,012.6
- Merchant Banking Corp.	-	213.2	835.4	1,209.0	1,443.1
- Securities Investment Trust Co.	14.8	633.1	5,399.6	24,179.7	26,664.6
Saving institutions	382.6	2,445.8	10,273.4	55,961.2	72,675.0
	(10.9)	(13.8)	(17.8)	(46.6)	(29.6)
- Trust accounts at banks	186.5	1,042.7	3,928.0	29,174.6	36,619.4
- Mutual Savings Finance Co.	50.4	419.5	2,765.4	8,940.3	12,021.2
- Credit unions	7.4	121.9	556.5	2,657.7	3,827.3
- Mutual credit	138.3	861.7	2,814.4	13,823.5	18,317.9
- Postal savings	-	-	209.1	1,365.1	1,889.2
Insurance companies	136.8	918.9	6,727.0	28,379.1	36,842.2
	(3.9)	(5.2)	(11.6)	(23.6)	(15.0)
Life Insurance Co.	136.8	918.9	6,580.7	27,165.8	35,316.0
Postal Life Insurance	-	-	146.3	1,213.3	1,526.2
Total	3,522.7	17,703.2	57,802.9	204,132.2	242,426.5
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

(a) Deposits in won currency on the balance sheet of institutions.

(b) Figures in ( ) indicate shares of deposits at each type of institution.

Source: The Bank of Korea, Monthly Bulletin (various issues), as cited in Amsden and Euh (1993).

Table 4  
A COMPARISON OF INTEREST RATES IN  
THE UNITED STATES AND KOREA

A. Real prime rate in Korea adjusted for changes in exchange Rate

	1979	1981	1983	1985	1987	1989	1991
(1) Korean prime rate (a)	18.5	19.0	10.0	11.5	11.5	12.5	12.5
(2) Exchange rate changes (b)	0	-6.2	-6.2	-7.6	8.0	0.7	-6.2
(3) (1) in terms of dollars	18.5	12.8	3.8	3.9	19.5	13.2	6.3

B. Real (dolar adjusted) Korean prime rate on US prime rate.

	1979	1981	1983	1985	1987	1989	1991
(1) Korean prime rate	18.5	12.8	3.8	3.9	19.5	13.2	6.3
(2) US Prime Rate	15.3	15.8	11.0	9.5	8.8	10.5	6.5
(3) (1)/(2) (%)	120.9	81.0	34.5	41.0	221.0	125.7	96.9

(a) At the end of the year.

(b) Negative numbers indicate won depreciation.

Source: The Bank of Korea, Monthly Bulletin (various issues), as cited in Amsden and Euh (1993).

Table 5  
**SOUTH KOREA'S FINANCIAL REFORMS**  
**STOCK MARKET INDICATORS**  
(end of year - 100 million won)

	1980	1985	1990	1991
Listed companies	352	342	669	686
Number of stocks listed	437	414	1,115	1,013
Total capital of listed companies (a)	24,214	46,654	239,816	255,096
Total market value (a)	25,266	65,704	790,197	731,178
(as % of GNP)	6.9%	9.0%	60.6%	51.6%
Total trading volume (a)	11,340	36,206	534,545	625,649
Stock population (b)	753	772	1,731	1,432
(as % of total population)	2.0%	1.9%	4.0%	3.3%
Composite stock price index	106.9	163.4	696.1	611.0
Dividend yield	19.6%	6.0%	2.6%	3.1%
P/E ratio	2.6	5.2	12.8	10.4

(a) 100 million won.

(b) Thousand.

Source: Ministry of Finance, Capital Market Statistics (January 1992), as cited in Amsden and Euh (1993).

Table 6  
**SOUTH KOREA'S FINANCIAL REFORMS**  
**SOURCES OF FUNDS BY THE CORPORATE SECTOR**  
(in percentage)

	63-65	66-71	72-76	77-81	82-86	87-91
Internal funds	47.7	25.4	32.9	23.3	33.5	26.4
External funds	52.3	74.6	67.1	76.7	66.5	73.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
External funds	100.0	100.0	100.0	100.0	100.0	100.0
Borrowings from						
Monetary						
institutions	48.4	41.8	51.1	53.7	41.8	36.0
Banks	33.5	32.8	34.3	32.6	22.6	17.0
Nonbanks	15.0	9.0	16.8	21.1	19.2	19.0
Securities						
(direct finance)	27.6	14.3	21.8	24.8	27.5	37.4
Debts	1.2	0.7	2.5	4.2	11.0	14.5
Stocks	21.4	11.8	18.1	14.4	16.5 (a)	22.9 (a)
Capital paid in	5.0	2.7	1.3	1.9		
Corporate bills	-	-	1.8	5.5	3.9	3.3
Government and						
curb market loans	8.5	7.8	-0.3	0.8	24.9 (b)	20.2 (b)
Borrowing						
from abroad	15.4	36.2	26.6	15.2	1.9	3.1

(a) Stocks and capital paid in.

(b) Others included.

Source: The Bank of Korea, *Annual Report*, (various issues), as cited in Amsden and Euh (1993).

Table 7  
TREND OF NOMINAL AND REAL INTEREST RATES  
(in percentage) (a)

	Nominal interest rate		GNP deflator (Rate of change) (d)	Real interest rate		Change in the price of land
	Savings deposit rate (b)	Curb market rate (c)		Savings deposit rate	Curb market rate	
1963	15.0	52.4	29.3	-14.3	23.1	-
1964	15.0	61.4	30.0	-15.0	31.4	47.0
1965	18.8	58.8	6.2	12.6	52.6	32.0
1966	30.0	58.7	14.5	15.5	44.6	-
1967	30.0	56.4	15.6	14.4	40.8	101.0
1968	27.6	55.9	16.1	11.5	39.8	51.3
1969	24.0	51.2	14.8	9.2	36.4	122.5
1970	22.8	50.8	15.6	7.2	35.2	2.8
1971	22.2	46.3	12.5	9.7	17.7	51.3
1972	15.7	38.9	16.7	-1.0	16.1	4.0
1973	12.6	39.2	13.6	-1.0	25.6	8.1
1974	14.8	37.6	30.5	-15.7	7.1	25.5
1975	15.0	41.3	25.2	-10.5	16.1	21.9
1976	15.5	40.5	21.2	-5.7	20.3	21.0
1977	16.2	38.1	16.6	-0.4	23.3	46.7
1978	16.7	41.7	22.8	-6.1	18.9	79.1
1979	18.6	42.4	19.6	-1.0	22.8	22.0
1980	22.4	45.0	24.0	-1.6	21.0	17.0
1981	19.2	35.3	16.9	2.3	18.4	7.1
1982	10.9	30.6	7.1	2.1	23.5	5.6
1983	8.0	25.8	5.0	3.0	20.8	31.7
1984	8.9	24.9	3.9	5.0	21.0	21.6
1985	10.0	24.0	4.2	5.8	19.8	7.0
1986	10.0	24.3	2.7	7.3	21.6	7.3
1987	10.0	23.2	3.4	6.6	19.8	14.7
1988	10.0	22.7	5.9	4.1	18.4	27.4
1989	10.0	23.1	5.2	4.8	17.9	32.0
1990	10.0	19.9	10.6	-0.6	9.3	20.6
1991	10.0	23.4	10.9	-0.9	12.5	12.8

(a) Bank of Korea survey data.

(b) Market rate from December 5, 1988.

(c) Unofficial rate surveyed by the BOK.

(d) Until 1970 based on 1975 constant price; from 1971, based on 1985 constant price.

Source: The Bank of Korea, *Monthly Bulletin*, (various issues), as cited in Amsden and Euh (1993).

Table 8  
**GROWTH OF THE FINANCIAL SECTOR**  
 (unit: %)

	1975	1978	1980	1985	1990	'91 (a)
M1/GNP	11.7	11.3	10.4	10.4	9.5	10.6
M2/GNP	31.3	33.1	34.2	39.2	40.8	40.7
M3/GNP	36.0	42.7	48.6	75.2	114.8	118.4
Corporate bond/GNP	-	2.5	4.5	10.0	7.0	15.2
Domestic credit/GNP	39.5	36.4	45.8	58.4	56.1	57.4
Deposit share (%)						
Banks	82.1	76.6	69.9	53.7	41.2	40.1
NBFIs	17.9	23.4	30.1	46.3	58.8	59.9
National saving (as % of GNP)	18.2	29.7	23.1	29.1	35.5	36.1
Stock market						
Capitalization/GNP	-	-	6.9	9.0	60.6	51.6

(a) Estimated data.

Source: Ministry of Finance, *Fiscal and Financial Statistics, Pt. 1 (1992)*, as cited in Amsden and Euh (1993).

## REFERENCES

- Amsden, Alice H. (1992). "A theory of government intervention in late industrialization", in Louis Putterman and Dietrich Rueschemeyer (eds.), *The State and the Market in Development: Synergy Or Rivalry?*: (Boulder: Lynne Rienner), pp. 53-84.
- (1991a). "The diffusion of development: The late-industrializing model and greater East Asia", *American Economic Review*, 81: 282-286.
- (1991b). "Innovation and decline: The American machine tool industry" (mimeo), Graduate Faculty, New School for Social Research.
- (1989). *Asia's Next Giant: South Korea and Late Industrialization* (New York and Oxford: Oxford University Press).
- (1977). "The division of labor is limited by the "type" of market: The Taiwanese machine tool industry". *World Development*, 5: 217-234.
- and Yoon-Dae Euh (1990). "Republic of Korea's Financial Reform: What Are the Lessons?", *UNCTAD Discussion Paper N° 30*, (April, Geneva, Switzerland).
- (1993). "South Korea's 1980s financial reform: Good-bye financial repression (maybe), hello new institutional restraints", *World Development*, 21: (forthcoming).
- Biggs, T.S. (1988). "Financing the emergence of small and medium enterprise in Taiwan: Financial mobilization and the flow of domestic credit to the private sector", *Employment and Enterprise Policy Analysis Discussion Papers N° 15* (Washington, D.C.: Employment and Enterprise Development Division, Office of Rural and Institutional Development, Bureau of Science and Technology, United States Agency for International Development).
- Chandler, Alfred Dupont, Jr. (1990). *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, Ma.: Harvard University Press).
- Clark, Gregory (1987). "Why isn't the whole world developed?: lessons from the cotton mills", *Journal of Economic History*, 47: 141-173.
- Coats, A. W. (ed.) (1971). *The Classical Economists and Economic Policy* (London: Methuen).
- Dahlman, Carl J. and Ousa Sananikone (1990). "Technology strategy in Taiwan: Exploiting foreign linkages and investing in local capability" (mimeo), (Washington, D.C.: World Bank).

- Euh, Yoon-Dae and James Baker (1990). *The Korean Banking System and Foreign Influence*. London: Routledge.
- Gerschenkron, A. (1962). *Economic Backwardness in Historical Perspective* (Cambridge, Ma.: Harvard University Press).
- Goodrich, Carter (ed.) (1967). *The Government and the Economy: 1783-1861* (Indianapolis: Bobbs-Merrill Co., Inc.).
- Haggard, Stephan (1990). *Pathways From the Periphery: The Politics of Growth in Newly Industrializing Countries* (Ithaca, N.Y.: Cornell University Press).
- Han, Dae-Woo (1988). "Liberalization of interest rates in Korea: its impact and policy issues", *Monthly Economic Review* (in Korean), 397 (December): 1-21.
- Hanson, J. and C. Neal (1984). "A review of interest rate policies in selected developing countries" (mimeo), (Washington, D.C.: World Bank, Financial Unit, Industrial Department (Sept.)).
- Herman, B. (1991). "International finance of developing Asia and the Pacific in the 1990s" (mimeo), Department of International Economic and Social Affairs, United Nations, New York.
- Hikino, Takashi and Alice H. Amsden (1993). "Staying behind, stumbling back, sneaking up, soaring ahead: Late industrialization in historical perspective", in William J. Baumol, Richard R. Nelson, and Edward N. Wolff (eds.), *Convergence in Productivity, With Some International Comparisons and Historical Examples* (New York: Oxford University Press).
- Hughes, Jonathan R.T. (1991). *The Governmental Habit Redux: Economic Controls From Colonial Times to the Present* (Princeton, N.J.: Princeton University Press).
- Khatkate, Deena R. (1988). "Assessing the impact of interest rates in less developed countries", *World Development*, 16 (May): 577-588.
- Lively, Robert (1955). "The American system: A review article", *Business History Review*, 29:81-97.
- Maddison, A. (1989). *The World Economy in the 20th Century* (Paris: Development Centre Studies, OECD).
- Nye, John V. (1991). "The myth of free trade Britain and fortress France: Tariffs and trade in the nineteenth century", *Journal of Economic History*, 51:
- Organisation for Economic Co-operation and Development (OECD) (1990). *Industrial Policy in OECD Countries: Annual Review* (Paris: OECD).



- Park, Yung Chul (1985). "Korea's experience with debt management", in G. Smith and J. Cuddington (eds.), *International Debt and the Developing Countries* (Baltimore: Johns Hopkins Press). *Securities Supervisory Board* (various years), *Monthly Review* (Seoul: Securities Supervisory Board).
- Shapiro, Helen (forthcoming). "Automobiles: Trade and investment flows in Brazil and Mexico", in D. Yoffie (ed.), *From Comparative Advantage to Globally Regulated Competition* (Boston, Ma.: Harvard Business School Press).
- Song, Byung Nak (1991). *The Korean Economy* (Hong Kong: Oxford University Press).
- Taylor, A. J. (1972). *Laissez-Faire and State Intervention in Britain* (London: Macmillan (for Economic History Society)).
- Taylor, Lance (1988). *Varieties of Stabilization Experience* (Oxford: Clarendon Press).
- United Nations Conference on Trade and Development (UNCTAD) (1989). *Trade and Development Report, 1989* (UNCTAD/TDR/9), United Nations publication, Sales N<sup>o</sup>: E.89.II.D.14 (New York: United Nations).
- Wade, Robert (1990). *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization* (Princeton: Princeton University Press).
- Yu, Byung-Ha (1988). "Household savings in Korea", *Monthly Bulletin* (in Korean), 478 (September): 31-44.



**SAVINGS AND FINANCIAL POLICY  
ISSUES IN SUB-SAHARAN AFRICA**

Machiko Nissanke



## CONTENTS

INTRODUCTION .....	107
I. FRAGMENTATION OF SAVINGS MOBILIZATION AND FINANCIAL INTERMEDIATION IN SUB-SAHARAN AFRICA .....	108
1. Characteristics of household savings in Sub-Saharan Africa .....	108
2. Fragmentation of financial systems .....	111
a) Informal finance .....	111
b) Formal financial institutions .....	113
i. Excess liquidity in the banking system .....	114
ii. Non performing loans .....	121
II. FINANCIAL DUALISM AND MARKET FRAGMENTATION .....	124
III. POLICY REQUIRED TO OVERCOME MARKET FRAGMENTATION .....	128
ANNEX OF FIGURES .....	137
REFERENCES .....	145



## INTRODUCTION

It has been increasingly recognized in recent years that the financial system and its intermediation function could play a vital role in economic development by effectively mobilizing and allocating resources and facilitating transformation and distribution of risks and maturities among savers and investors (World Bank 1989).

The Structural Adjustment Programmes (SAPs) in Sub-Saharan Africa adopted by many countries in response to the worsening economic crisis of the 1980s have placed high priority on financial sector reform. Financial liberalization policy, based largely on the arguments advanced by the Mc Kinnon-Shaw school<sup>1</sup>, has been implemented subsequently in these countries as part of economic reform packages. Special Financial Sector Adjustment loans (FINSAP loans) have been taken up to uphold reform measures and to restructure and strengthen distressed financial systems in several countries (e. g. Ghana, Tanzania and Uganda). However, the FINSAP has focused mainly on putting distressed formal institutions on a sound financial footing through restructuring and refinancing of balance sheets. Emphasis is placed on prudence, an improved regulatory environment and supervision of the banks' operations. However, these reform measures, together with the financial liberalization policy, have at best had limited impact on economic development so far.

---

<sup>1</sup> See, Mckinnon (1973), Shaw (1973) and Fry (1982, 1988). For a critical literature survey of this school, see Nissanke (1991).

Drawing on the lessons of liberalization experiences of a number of Latin American and Asian countries in the 1970s and 1980s, recent literature on financial policies emphasizes the need for careful design of the sequence, pace and timing of financial liberalization and the importance of its coordination with changing macroeconomic conditions<sup>2</sup>. In the case of low-income economies, however, it is particularly critical to design the financial sector reform with a view to the speed of deepening of markets. Extensive efforts at institution-building are needed to achieve sufficient market depth with adequate market-support structure.

Contrary to the main thrust of financial reform within structural adjustment programmes as originally devised, interest rate adjustments alone are neither effective nor sufficient to stimulate improved resource mobilisation and allocation as they do not directly address the core systemic or structural problems as perceived either by individuals or by the financial institutions.

This paper examines, drawing largely on case studies of Ghana, Kenya, Malawi and Zambia (Nissanke *et al.* 1991a), first, the current fragmented state of savings mobilization and intermediation in Sub-Saharan Africa (section I) and then presents various theoretical explanations for this prevailing condition (section II). The concluding section attempts to address the issue of how best to overcome the existing situation.

## I. FRAGMENTATION OF SAVINGS MOBILIZATION AND FINANCIAL INTERMEDIATION IN SUB-SAHARAN AFRICA

### 1. Characteristics of household savings in Sub-Saharan Africa

Even in the low-income economies of Sub-Saharan Africa the potential of the household sector for generating savings is significant. Our study suggests that *savings capacity and potential for growth* in this sector is by no means negligible. However, there are several characteristics of household savings to note.

<sup>2</sup> See, for example, Cho and Khatkhate (1989), Corbo and DeMelo (1985, 1987) and the World Bank (1989).



*First*, a critical difference in the size, form and pattern of savings between rural and urban households may be noted. Rural households tend to have higher average and marginal propensities to save. Voluntary savings capacities in rural areas may be substantial, with far more liquidity than is usually assumed. Though liquidity generated does not necessarily constitute a surplus as such<sup>3</sup>, the agricultural production cycle and the seasonal and highly variable income creates an absolute need for savings. The patterns are distinctly "short-run", governed by the seasonality of agricultural production and that of liquidity flows of rural household income.

*Secondly*, to the extent that rural households dominate the household sector, *financial* savings have a modest share in total household savings. According to the theory, non-financial forms of asset-holding as stores of value indicate large-scale 'efficiency loss' to the economy, where the financial system can potentially perform an efficient intermediation function. Unproductive commodity holdings could entail substantial storage and transaction costs. In the countries studied, the insignificant share of financial assets in total savings undoubtedly also reflects the insufficient degree of monetization of the economy at large. Indeed, a reverse process of de-monetization has taken place in the countries where economic conditions had deteriorated sharply in the 1980s<sup>4</sup>. The asset composition of household savings is generally determined by the nature of the economic activities which a particular household is engaged in as well as the degree of liquidity, risk, return structure of different assets and their storage and transportation costs. In this latter sense, it is also affected by the perception of the households as to their liquidity constraints and the ease with which they can switch between different sets of assets.

The *third* characteristic of household savings to note is that the financial savings of the household sector are *small in size* per unit of transaction and *short-term* in frequency. As noted by Deaton (1989), savings by the household sector in developing countries are of a "high frequency" nature, as opposed to the "low frequency" life-cycle savings in developed eco-

<sup>3</sup> As Von Pischke notes, low levels of surplus do not necessarily accompany low levels of liquidity (Von Pischke (1991) p. 81).

<sup>4</sup> For the degree of monetization and the factors explaining the process of de-monetization in the sample countries, see Nissanke et. al. (op. cit.).

nomies: savings, in essence, provide a buffer between uncertain and unpredictable income and an already low level of consumption. High volatility and seasonality in income necessitate savings of this nature primarily to protect one's livelihood in *high-risk environments*. Under these conditions, financial savings of household display strong preference for more liquid assets and maximum flexibility. Even contractual savings, conducted within the informal sector, e.g. for insurance purposes, tend to be for a very short-term time horizon and on a limited scale.

At the same time the small size and high-frequency of savings imply high transaction costs to financial intermediaries in tapping the household/non-corporate sector. Nevertheless, small but regular savings by large numbers of householders/traders have been the basis of operations for many informal associations, such as ROSCAs (rotating savings and credit associations) and susu-collectors. This is closely related to the *fourth* characteristic of household savings: most of the financial savings of the household sector have been mobilized through informal financial agents or institutions. The country-estimates suggest that savings mobilized and credit extended by the informal financial sector appear to exceed by a large multiple those of formal institutions. These savings are used for social and private consumption, as well as productive purposes, including farming activities such as purchasing fertilizer or small-scale investment, mostly in retail trade and commercial activities.

Numerous factors may be advanced as reasons inhibiting a large part of the population from using formal institutions, even where such facilities exist in rural areas. In our case studies, the high transaction cost of borrowing, lack of marketable collateral and low probability of acquiring credit in addition to mistrust ranked high on the list; low interest rates were only a marginal factor affecting borrowers' attitude to using savings facilities. From the lenders point of view, the combination of high risks (arising from lack of marketable collateral and default risk) and high transaction costs associated with small short-term loans and deposits have undermined efforts to bring financial services to low-income groups, the micro and small-scale enterprise sector and rural small holders. It is commonly believed that an insufficient branch network, particularly in the rural areas, is the inhibiting factor. However there is only weak statistical evidence connecting the rate of diffusion of banks (and real interest rates), on the one hand,

and the growth of financial savings, on the other. Unless transactions costs can be lowered and risks management improved, neither the expansion of the number of branches, mobile facilities and specialized rural banks nor interest rate adjustments will rectify the current inefficient and passive attitude of banks towards savings mobilization in the household sector.

The persistent financial dualism between the formal and informal sectors and the limited progress in financial "widening"<sup>5</sup> by the formal sector can thus be attributed specifically to the incentive to interact of both borrowers/savers and lenders/intermediaries. As mentioned above, the lack of access to *credit* facilities has hindered the majority of the population in using the *savings* facilities of formal institutions. Our country studies point to the critical importance of linking savings mobilization with credit provision. There is also ample evidence that credit unrelated to savings has undermined many targeted programmes (Adams *et al.* (1984), Seibel (1989), Meyer (1989) among others).

At the same time, commercial banks, the dominant financial institution in these countries, often do not have the incentive to actively mobilize savings, due largely to the *excess liquidity syndrome*. Thus, one of the prime factors explaining the relative size of the informal financial sector and its vibrant presence within the household sector lies in the striking degree of constrained behaviour of formal institutions. The characteristics of the financial system will be examined below.

## 2. Fragmentation of financial systems

### a) Informal finance

While many of the traditional forms of savings and informal financial activities have existed for a long time in these countries, a dynamism has begun to gain momentum in recent years, as the formal sector has failed to stimulate economic growth or respond to the need of real sector development, in particular, that of the private sector. Rather financial distress

---

<sup>5</sup> The process of financial widening can be viewed as extending the frontier/boundary between formal and informal activities (Von Pischke (1991)).

permeated the formal system in many of Sub-Saharan African countries as the financial position of governments and many parastatals had sharply deteriorated in the 1980s. Presently, thriving forces are operating on a visible scale within parts of the informal financial sector. In Ghana, the informal sector, *susu*-collectors in particular, performs a very dynamic role in savings mobilization (Aryeetey *et al.* 1991a). In Malawi and Zambia the informal sector plays a more active role in lending operations, enjoying considerable comparative advantages over the formal sector in terms of accessibility, flexibility, transaction costs, and low default rates (Chipeta and Mkandawire (1991a) and Mutukwa (1991a). Alternative methods of risk assessment, monitoring and the application of social peer pressure for repayment has achieved results unattained by the formal sector.

The emerging dynamism of the informal sector has not been transmitted to the formal financial sector through complementary relationships or links on any significant scale. Indeed, the informal market has continued to thrive out of a need to fill gaps in the financial system. Despite the growing size of the informal sector, the process of forming an integrated financial system through developing linkages of these activities to more efficient forms of mobilization and intermediation of savings has hardly begun.

However, in emphasizing the strengths of the informal system, one should also be aware of its limitations in financial intermediation on a larger scale. In the absence of sufficient information and market signals, funds mobilized through the informal sector are at present rarely channelled into economic activities beyond a confined sphere. For example, most of savings mobilized by *susu*-collectors from small-scale trading activity are channelled into the expansion of that sector only. The money is not used for lending to other groups in informal activity, such as small-scale manufacturing, repair shops or handiwork on a significant scale. Informal lenders in Malawi and Zambia do lend to a wide range of productive activities. Yet, the high risk of these activities and the extreme short-run nature of lending impede the full financial intermediation function to be performed by these single agents. Mutukwa (1991) notes that group-based associations are subject to highly co-variant risks, since their members tend to engage in the same economic activity in the same community and belong to the same income group. This factor and the seasonality of most rural income make it hard

for these associations to expand and perform a dynamic role in financial intermediation.

The localized nature of the informal activities, combined with high risks and transaction costs beyond the limited vicinity act as a constraint on viable large-scale financial intermediation by the informal financial sector on its own. For this reason, the potential use of savings mobilized through the informal sector for economy-wide diversification remains unrealized. Consequently, a process of industrialization and development based on informal small production units has not yet got off the ground. Savings mobilization is also currently fragmented into a large number of operations by multifarious informal activities.

Moreover, there is little intermediation between saving and investing units *within* the informal sector. Intermediation usually takes place only over time for each individual unit. Informal savers often earn no interest or may even incur a negative nominal interest rate (as in the *susu*-collector system), even though investing units in the economy would be willing to pay positive real rates for funds. Few informal financial institutions provide term finance (either directly or through linkages with the formal system).

#### b) Formal financial institutions

The paucity of institutions in terms of both structure and numbers is not necessarily the kernel of the problem: a large number of institutions have been established. However, despite their institutional diversity and efforts to extend the branch networks, the formal financial institutions have failed to meet the need of the real sector development in Ghana, Zambia and Malawi, particularly. Nor have they succeeded in meeting the credit needs of the wider groups of population in all four countries studied. The problem of poor performance of formal institutions arises from the severity of their operational constraints and fragmentation within the formal system, which is most clearly demonstrated by the coexistence of "excess liquidity syndrome" and "non-performing term loans"<sup>6</sup>.

<sup>6</sup> See Nissanke (1992a) for a fuller discussion of the brief description of the two phenomena summarized here.

i. *Excess liquidity in the banking system*

For a number of Sub-Saharan countries, the disequilibrium resulting from the "excess liquidity" syndrome has long been a wide-spread phenomenon where banks have been allowed to operate largely on a commercial basis<sup>7</sup>. The term is applied here to the situation where the banking institutions, in particular those specializing in the short end of the market such as commercial banks, hold liquidity in excess well above the required statutory level. Excess liquidity is defined as *net excess* of actual voluntary hoardings of liquid assets (in cash and short-term government paper) over the minimum reserve requirements<sup>8</sup>. The levels of minimum reserve requirements in developing countries are usually set as high as 40 to 50 per cent of total bank deposits compared to the typical levels of around 10 to 15 per cent in industrialized countries (Kitchen 1986). This implies that total assets held in liquid assets can often exceed the level of 70 per cent of total deposit liabilities of the banks. These banks have held their surplus

---

<sup>7</sup> Some commercial banks were established by expatriate banks primarily for financing external -often colonial- trade in preindependence years and later nationalized to become majority-government owned or remain foreign controlled. Others were newly established in the post-independence era as publicly owned. Operational decisions of most of these banks are in principle guided by commercial considerations, though they were often required to take on a developmental function in advancing loans to priority sectors. In contrast, banking operations of some state-owned commercial banks have been governed primarily by the need to finance fiscal deficits and to cover operational loss of public enterprises and marketing boards (eg. Tanzania and Uganda, see Collier and Gunning (1991) for the Tanzanian case).

<sup>8</sup> The term "excess liquidity" here refers to banks' voluntary hoardings of liquid assets as opposed to "monetary overhang" when nonbank public accumulates liquidity as a result of shortages in the goods markets. The former phenomenon becomes prevalent, when perceived default risks increase and banks resort to a sharp retrenchment in lending, exacerbating the recessionary tendencies resulting from reduced aggregate demand. Caprio and Honohan (1991) report that in the United States of America this was observed during the Great Recession of the 1930s as well as in the "credit crunch" of 1990-1991. In the earlier episode, the share of liquid assets in total deposits of the US banking institutions was reported to have nearly doubled from 35 per cent in 1929-1930 to 65 per cent in 1935, then further to 70 per cent in 1940. The deep recession that seized major industrialized economies in 1992 has also been characterized by debt deflation on a global scale, where portfolios of banking institutions have been rapidly deteriorating with increasing non-performing loans and debtors-consumers have been making adjustments to their over-leveraged positions from excess borrowing in the previous period (UNCTAD 1992).

assets on their own volition in liquid form, in cash with no return or in treasury bills or government stocks which, until very recently, yielded low returns<sup>9</sup>.

An explanation of this phenomenon can be manifold: First, it is a reflection of the early stage of real sector development and a generally poor, often unstable economic environment. Further, part of excess liquidity in the banks' portfolio may simply reflect a degree of inefficiency of banking operations, i.e. their disproportionately high operational/intermediation costs, which are not covered by the prevailing spreads and thus require holding a large proportion of liquid assets. A high proportion of non-performing loans with inadequate provisions for bad debts also forces banks to hold more liquid assets than would appear necessary on the basis of a balance sheet analysis.

Furthermore, liquidity in excess could contain *transitory* components as well as permanent ones. The former would in fact reflect some time lags in bankers' responses to temporary external shocks (sudden changes in the terms of trade or a large influx of capital) or policy shocks such as devaluation or uncontrolled money supply. Accordingly they should be viewed as short-term disequilibrium phenomena. The accumulation of liquidity in these cases is temporary, reflecting the slow speed of adjustment by banking institutions to shocks and thus also a degree of operational inefficiency.

The main component of excess liquidity holdings of the commercial banks in Kenya belongs to this category; the Kenyan banks have indeed been dynamic in savings mobilization and credit provision (Mwega 1991). As shown in Fig. 1, the minimum statutory required liquidity ratio in Kenya has been set at the very low level of 14 to 18 per cent, a level not far from that observed in industrial countries. Indeed, the actual liquidity

<sup>9</sup> Naturally Treasury Bills and Government Paper held as secondary reserves are not nearly as liquid as cash primary reserves. Risk-adjusted returns on these holdings have been, however, high enough to justify investment in them compared to lending to activities perceived to be highly risky, even when nominal returns on them were low. The recent upward adjustments of rates of returns on these paper as a part of financial liberalization and monetary stabilization policies implemented in a number of countries have made most of lending operations unattractive to banks, except very low cost and highly remunerative lending (Nissanke 1992a).

ratio maintained by the commercial banks has been far below those observed in the other case studies throughout the 1970s and 1980s, ranging from 18 per cent in 1974 to 1975 and 1983 to 28 per cent in 1977 and 1986, with fluctuating margins from year to year. A preliminary analysis of annual changes in the commercial bank liquidity ratio (Mwega 1991) suggests that there are the considerable adjustment lags involved between an increase in commercial banks deposit liabilities and their increased lending to borrowers<sup>10</sup>. In contrast to the other three countries studied, excess liquidity in Kenya is of more transitory nature. Nevertheless, the excess in liquidity ratio has still averaged more than 5 per cent of deposit liabilities throughout the 1970s and 1980s, exceeding 10 per cent in some years.

The sheer scale and persistence of the syndrome in the other countries studied (Ghana, Malawi and Zambia) points to the need for analytical explanations of the permanent components of excess liquidity. The nature and scale of the phenomenon of excess liquidity in these three countries are illustrated in the following statistics:

In Ghana, the required minimum reserve requirements have historically been set very high (Fig. 2): over 80 per cent of deposits in 1979 and 1980. The statutory level had been gradually brought down to 40 per cent in 1985. The actual reserves held in liquid assets by the banks were over 70 per cent in 1980-1983, indicating the extreme degree of 'low lending trap' in those years. In 1988, the year when the liberalization policy was already well in place, the commercial banks held about 15 per cent of their total deposit liabilities as *excess* reserves. Of these, about 5 per cent was held in cash (in addition to the statutory requirement for 20 per cent cash reserves) and 10 per cent was in the form of government paper (over and above the statutory requirement for 25 per cent secondary reserves). This brought the share of liquid assets to 60 per cent of total deposit liabilities for the entire banking system in that year. The level of liquid assets actually held by the banks subsequently increased, reaching over 65 per cent in March 1991, as shown in Fig. 3.

---

<sup>10</sup> The Kenyan country study suggests that the commercial banks liquidity decisions are influenced by several factors including the maximum lending rates, the structure of deposit liabilities, the required minimum ratios, and the changes in the commercial banks monetary base.



In Malawi, the *excess* liquid assets held by the commercial banks amounted to from 20 to 25 per cent of total deposits in the period 1973 to 1985, while the minimum reserve ratio required was set at 25 per cent, making 45 to 50 per cent of their total assets cash or government papers<sup>11</sup>. There was a sharp run-down of liquid assets in the late 1970s, when the commercial banks had accumulated non-performing loans through their large exposure towards the estate tobacco sector, as tobacco prices collapsed. This experience has made the commercial banks, which had taken some years to recuperate their loan portfolio, much more conservative in asset management. Despite the rise in the minimum liquidity ratio to 30 per cent in 1980, the scale of excess liquidity began to escalate further after 1983<sup>12</sup>. Voluntary holding of excess liquid assets were over 20 per cent in 1985; this persisted throughout the liberalization period, further increasing to 40 per cent above the minimum reserve ratio, bringing the share of liquid assets to 70 per cent of total deposits in 1987 (see Fig. 4)<sup>13</sup>.

The scale of the problem has been much greater in Zambia than in the other countries in the sample (Fig. 5). The commercial banks are known to have persistently carried considerable amounts of excess liquidity throughout the 1970s and 1980s, excepting 1974. First, the statutory required ratio had been set in a range of 25 to 40 per cent most years. To mop up liquidity in the system, seen to affect the monetary stability, the central bank raised the minimum required level to 40 per cent in recent years. The actual liquidity ratio has been above 60 per cent for most years, reaching 82 per cent in 1988, exceeding the already high statutory level by 25 to 45 per cent.

As explanations for the excess liquidity syndrome illustrated by these statistics, two theoretical propositions may be advanced<sup>14</sup>:

---

<sup>11</sup> In the 1970s, the largest component of liquid assets was held in government stocks rather than in Treasury Bills.

<sup>12</sup> During the 1980s, the major part of liquid assets was held as deposits at the central bank, rather than in government securities, as in the 1970s. Some of these deposits at the central bank reflected the bank's liabilities for outstanding import payments awaiting externalization because of inadequate foreign exchange.

<sup>13</sup> It is reported that the trade liberalization measures taken in 1989 subsequently eased the banks' excess liquidity problems to some extent.

<sup>14</sup> For more detailed discussion of the two paradigms, see Section II below.

First, using the Financial Repression Hypothesis, McKinnon (1973), Shaw (1973), Fry (1982, 1988), it may be argued that the problem is associated with the governments' intervention in credit markets through a policy of low interest rate, a government credit ceiling and a restrictive sectoral credit-allocation policy.

Indeed, there is indication that the policies of low interest rates and directed credit allocation have had, to a varying degree, negative impacts on the operations of commercial banks. Credit guidelines imposing mandatory sectoral allocation have undoubtedly served to undermine incentives for banks to mobilize savings, as is most apparent in the Ghanaian case. Once banks had enough deposits to meet the set credit targets of the central bank, savings mobilization was no longer encouraged. If the banks were not favourably disposed towards those priority sectors, loans were withheld. Consequently they did not see an urgent need to mobilize additional savings.

Furthermore, lending decisions by banks have not been based strictly on commercial assessments of risks against expected rates of return but rather have often been influenced by political clout and connections. Indeed, notable conflict between government sectoral credit allocation and the banks' commercial considerations has been with sectors designated as the priority, as these are identified by the bankers as high-risk areas. Hence, such conditions may have contributed to passive banking practice; a component of excess liquidity may have thus been related to 'involuntary credit rationing' as a result of enforced patterns of credit allocation.

An alternative hypothesis can be drawn from the Imperfect Information Paradigm (Stiglitz and Weiss (1981), Stiglitz (1989)), to explain the persistence of the syndrome, even in the post liberalization years, as resulting from 'voluntary credit rationing' and self-imposed caution on the part of bankers operating in a high risk environment with imperfect and costly information.

In less developed economies, successful applicants who are considered low-risk tend to represent established large-scale enterprises or estate owners, either foreign or publicly owned. Many, particularly the state enterprises, are known to have chronically suffered from poor management, low capacity utilization and acute financial problems, prompting the current privatization debate (Adam *et al.* 1992). Potentially dynamic productive small-

scale entities have little chance of obtaining bank credit due to high transaction costs and perceived risks in dealing with them. High transactions costs can prevent banks from undertaking adequate screening, monitoring and credit-enforcement procedure against default risks. The perceived high risks of lending make banks extremely risk-averse in extending credit to small borrowers, particularly those without collateral assets.

Bankers often explain their overly conservative lending policy by citing the absence of *viable projects* to which to lend. It can be argued that it is not necessarily the absence of viable projects per se but the lack of mechanisms by which risks and viability can be adequately assessed, and new ventures selected, monitored and repayment enforced. The adoption of liberalization policies have had limited impact on this component of excess liquidity. While latent demand for credit by solvent borrowers may remain unsatisfied, the banking sector accumulate excess liquidity, withdrawing support from productive investment. Excess liquidity can thus give rise to 'a low lending trap' (Caprio and Honohan (1991)) and can impede the emergence of vigorous entrepreneurship.

Several implications may be derived from the Excess Liquidity Syndrome:

*First*, faced with limited lending opportunities worthy deemed and excess liquidity hoarding, the banks lack incentive to mobilize additional savings. Banks have even regarded the shift to deposits with longer maturity as raising the average costs of keeping funds, given the absence of good investment opportunities promising a high rate of return which could justify the wide margin between deposit and lending rates to cover high intermediation costs. Therefore, commercial banks in Malawi and Ghana, for example, are reported to have been turning depositors away, in particular discouraging them from opening accounts bearing high rates of interest<sup>15</sup>.

---

<sup>15</sup> The adoption of an interest rate liberalization policy has had very limited impact on the resolution of this phenomenon, even where higher financial savings at the formal financial institutions followed, as illustrated by the reaction of Malawian banks to the upward adjustments in interest rates in 1987-88 (Chipeta and Mkandawire (1991a) and Nissanke (1992a). The banks are, first of all, constrained to raise the lending rate because of the adverse selection incentive and moral hazard effects (Stiglitz and Weiss (1981). Even if the lending rate is raised to cover the intermediation cost after the upward adjustment in the deposit rate, the resulted reduction in demand for loanable funds squeezes their profit margin and makes it expensive to keep interest-bearing deposits.

*Secondly*, the 'low lending trap' engendered by the excess liquidity syndrome implies a serious deficiency in the system of financial intermediation and it obstructs a steady flow in the savings-investment circuit. Given the short-term liability structure, and the weak capital base in most cases, the portfolio management of the commercial banks is geared to matching the maturity structure of assets with the existing maturities of liabilities. Very little term transformation has taken place. Thus, the commercial banks in Ghana, Malawi and Zambia have been very selective and discriminatory, exhibiting extreme conservatism in their portfolio management.

*Thirdly*, there is an interesting link between excess liquidity and the mechanism of *crowding-out* of private finance by public finance requirements in these economies. From the commercial banks' point of view, there is little *effective* demand for credit from the private sector and hence the public sector automatically assumes an unrivalled position as a receiver of formal credit and as a vendor of financial paper. Yet, existing literature suggests that limited access to credit is one of principal constraints for hindering an expansion of the productive capacity of micro enterprises and the SSE sector. This points to the considerable gaps between effective securitized demand and notional unsecuritized demand for credit<sup>16</sup>. Conventional asset-based lending which requires tangible collateral has put a major restriction on lending.

Finally, the prevalence of the excess liquidity syndrome casts serious doubts on the efficacy of monetary instruments for stabilization. Monetary tightening -a standard policy response to the emergence and growth of excess liquidity in these economies- would not get to the crux of the problem. Credit ceilings imposed under stabilization programmes are singularly ineffective in an environment in which the portfolio management of banks is conservative and reactive rather than dynamic. At the same time, it is difficult to regulate the money supply through manipulating bank liquidity, when the relationship between bank liquidity and credit is unsta-

---

<sup>16</sup> Von Pischke (1991) argues, however, that the concept of credit needs and the perception of unsatisfied credit demand should not be adopted as a prime criterion for lending. In order to achieve long-run viability and sustainability of financial institutions, he instead advocates using the risk-adjusted debt capacity, which could dynamically evolve over time, as a basis for credit policy.

ble and unpredictable due to excess liquidity. Furthermore, upward adjustments to returns on treasury bills necessiated for monetary stabilization can render most private sector lending unattractive, resulting in a further intensification of the "crowding-out" effect.

## *ii. Non-performing loans*

Excess liquidity holdings are observed alongside a growing number of non-performing loans and low recovery rates, particularly among publicly owned financial institutions, where political interference in lending decisions is prevalent. The World Bank (1989) has suggested that in developing countries well over 20 per cent of total loans of banks are non-performing. This may be an under-estimate for Africa, where loan repayment rates are often reported as low as 20-40 per cent.

In general, the causes of financial distress manifested in large proportions of non-performing loans in the banks' portfolio can be attributed to numerous factors, both internally and externally generated. In the low-income, often commodity-dependent economies, the financial institutions are frequently exposed to large external shocks with the subsequently required policy adjustments far exceeding the capacity of the economies or the financial institutions to absorb these volatile forces and manage the associated aggregate risks. The portfolio structure of these institutions is little diversified. This makes it hard to offset financial loss of one activity against gains from others. Hence a wave of loan defaults can ripple throughout the financial system, due to high risk covariance<sup>17</sup> characteristic of these economies. Financial distress ensues.

The difficulties of financial institutions to cope with these external forces are undoubtedly exacerbated by their internal structural weakness, such as the low capital adequacy ratio, poor asset quality as a result of inadequate loan appraisal and poor contract enforcement procedures, not to mention political patronage and corruption. The inadequate bank supervision by the central bank makes it hard to arrest an accumulation of non-performing loans at an early stage.

---

<sup>17</sup> When economies are narrowly based, credit risks are highly correlated across loans extended for similar economic activities.

The problem of non-performing loans is, however, most pronounced among the development finance institutions (DFIs) or the targeted credit schemes such as agricultural credit schemes. These were established at a time when the supply-leading approach was prominent; the former were set up in recognition of the shortages of medium- and long-term credit to the priority sectors; the latter were expected to encourage flows of concessionary formal credit specifically to the rural areas. Many of the DFIs were also created so as to achieve developmental and social objectives, such as diversification and enterprise/employment creation and thus to provide combined financial and technical services to local enterprises. For this the DFIs were typically funded on term-loans/equity from external sources which involved exchange and interest rate risks. They have continued to be financed either by external finance or through the government, often through refinancing schemes of the central bank when they failed to meet the capital adequacy requirements.

Most DFIs or special schemes have not been involved in mobilization of local savings to any significant extent and loan recovery was not given high priority, with inevitable consequences for their funds. Their portfolio position has been further weakened by taking on large financial risks, and specializing in long-term lending to high risk areas such as agricultural and industrial finance. Their excessive exposure in high risk sectors is compounded by generally poor risk analysis or inadequate assessment of debt capacity, excessive political pressure on lending decisions, and limited opportunities for asset divestiture.

Frequent recapitalization has not solved the underlying problem facing the DFIs. This points to a failure of the standard 'supply-leading' approach, which creates financial institutions to meet demand for term capital without simultaneously addressing other fundamental bottlenecks inhibiting the viability of these banking operations -high transaction costs and inadequate risk analysis and management- indispensable for their specialized lending operation. Conventional term risk management schemes appear to have been inadequate, and in some cases inappropriate, to cope with the degree of risk facing the DFIs.

It is important to recognize the need to resolve, in practical terms, the tension that exists between the developmental and social objectives of the DFIs (and other special lending schemes) and their financial and ope-

rational liability. Yet, there are several examples of DFIs which have achieved better performance by adopting a more flexible, pragmatic and commercial approach, while at the same time managing to meet development objectives. Good performers can be found not only in more dynamic Asian economies but also in Sub-Saharan Africa (e.g. in Zimbabwe and Botswana).

The recommendation that DFIs should reorientate their priorities to commercial goals, however, leaves open the critical question of how to reach the social objectives of loan provisions to the priority sectors and meet the credit need of micro enterprises and low-income people, thus following a broad-based and more equitable development path. Adams and his associates (1984) suggest that policies affecting income levels through input and output pricing policies are more appropriate in stimulating economic development than special credit programmes.

However, serious reservations have been cast on the notion that credit will "trickle down" to where it is needed through market forces and without policy intervention. Can a viable alternative system to the conventional DFIs be created to ensure equitable development, through a combination of financial institution-building, market deepening, linkage development and new innovative schemes and instruments? The example of NGO and donor involvement in innovative schemes suggests a possible way, although it is impossible to deduce that these will proliferate to the point where widespread self-sustained development is achieved unless it is founded on active mobilization of local savings<sup>18</sup>.

The phenomena of excess liquidity and non-performing term loans suggest that banking institutions taking the traditional approach have failed to make any significant inroads on expansion at the "frontier". Furthermore, the co-existence of these two phenomena not only highlights a degree of fragmentation within the formal system, but also the serious mismatch of liquidity positions and the asset maturity structure of the system: While *short-term* money abounds in the form of excess liquidity in one segment of the banking system, within the economy as a whole there is an endemic shortage of capital, particularly *long-term* loan provisions

---

<sup>18</sup> For these "grassroots" banking programmes, modelled largely on the Grameen Bank of Bangladesh, see below.

for productive investment and diversification. The formal system lacks the ability to take on the risks associated with the *maturity term transformation*<sup>19</sup>. The absence of functional inter-bank money and viable capital markets limits the ability of financial institutions to reduce or hedge against these risks. Resources mobilized by financial institutions are used more by government and the public sector, with no real choices being made in terms of risk assessment or prudent resource allocation to private users of credit. The intermediation function of the formal system is thus seriously circumscribed.

Meanwhile, dualism of the formal and informal sectors has been increasing and little progress has been made in financial widening by the formal institutions in Sub-Saharan Africa in the last three decades. Any practical long-term financial sector development policy for these economies has to take into account predominant characteristics of their financial system and operations; namely, financial market *fragmentation* and pronounced *dualism* between the formal and informal financial sectors. The next section, explores theoretical explanations for this phenomenon.

## II. FINANCIAL DUALISM AND MARKET FRAGMENTATION

The conventional theory of "financial dualism" suggests that the extent and degree of segmentation of financial markets between formal and informal sectors reflects the inherent dualism of economic and social structures, rooted firmly in the population's traditional values and practice. It is suggested that as development proceeds, the informal sector would wither away as it would be integrated into the formal system.

Empirical evidence emerging from developing countries indicates, however, that the actual process of interaction between the financial struc-

---

<sup>19</sup> Many argue that this weakness in maturity transformation and long-term loan provision may not present a problem, so long as the formal banking institutions are able to supply sufficient working capital, while retained profits and internally generated savings could be used for term investment as Mckinnon's complementary hypothesis suggests. It should be noted, however, the growth of enterprises may be slower if fixed investment is solely dependent on retained earnings.



ture and real sector development is more intricate than this simple view suggests. In some dynamic economies of Asia, integration of the financial system has indeed taken place; the intermediation efficiency of the system as a whole has increased over time. Nevertheless, a heterogeneous and dynamic informal financial sector continues to exist. Indeed the formal and informal sectors form a continuum of the integrated and well-functioning financial system, with specialization in financial services by each sector (Biggs 1991, Ghatge 1990).

In contrast, in other developing countries, where economic performance has been poor or stagnant, financial dualism appears to have deepened over time; the two sectors persistently form almost discrete financial enclaves with little interaction between them. In such circumstances, market segmentation can be detrimental to efficient functioning of the financial system. A theoretical explanation is required to understand this phenomenon<sup>20</sup>.

The 'financial repression' hypothesis attributes the prime cause for the dualism and fragmentation to repressive financial policies. With selective or sectoral credit policies, a segmented and fragmented credit market emerges in which some borrowers obtain (rationed) credits at highly negative real interest rates, while non-favoured borrowers must seek funds in expensive and unreliable informal credit markets<sup>21</sup>.

In contrast, the imperfect information paradigm (Stiglitz and Weiss (1981), Stiglitz (1989)) explains the fragmentation of financial markets in terms of the nature of credit transactions. According to this paradigm, in the presence of imperfect information and costly contract enforcement, market failures result from *adverse selection* and *incentive effects* and *moral hazard*, which undermine the operation of financial markets. As the interest rate charged increases, borrowers with worthwhile investments may be discouraged from seeking loans and the 'quality' of the mix of applicants changes adversely. Further, borrowers have an incentive to adopt projects that promise higher returns but with greater risks; this increases the pro-

---

<sup>20</sup> Explanations for market segmentation are not necessarily limited to the two hypotheses discussed below, nor are these mutually exclusive competing hypotheses. Both Hypotheses may well be valid in combination, as suggested by Roemer and Jones (1991), (see below).

<sup>21</sup> See Nissanke (1991) for a critical review of this thesis.

bability of defaults. There is also a moral hazard with high interest rates, when applicants borrow to pay interest on previous loans or simply to stave off bankruptcy rather than to invest or to finance working capital.

With these possibilities, lenders may choose not to raise interest rate to clear the market, when faced with excess demand for loans, since the lenders' expected return on a loan could deteriorate as the interest rate increases. Instead, they opt to select borrowers by adopting their own rationing procedure. Thus, the interest rate has generally to take on an additional function of regulating the risk composition of the portfolio of financial intermediaries; it then often fails to perform its market clearing role; hence market equilibrium is frequently characterized by credit rationing, even in the absence of credit controls and direct credit allocation. In such a case, by this paradigm, free markets do not ensure Pareto efficient allocation, nor do policies that move the economy closer to free market solutions enhance welfare.

While these features are universally applicable to all credit transactions, the problems arising therefrom are likely to be most pronounced in low-income countries, where the economy-wide information flows are extremely limited, access to information asymmetric and information gathering extremely costly. Where there is a generally low level of income and asset accumulation, with widespread poverty and highly skewed income and asset distribution, strict collateral requirement restricts access to credit; moreover the applicability of various collateral-substitutes, such as reputation and group responsibility, cannot be well tested. There is limited scope for legal enforcement owing to the inadequate infrastructure of legal institutions.

With these deficiencies in markets and market-support infrastructure, the transaction costs for financial intermediaries -which in addition must minimize depositors' risks- are prohibitively high. As discussed above, banks tend to become overly conservative and risk-averse in extending loans to non-established borrowers. This sets economic constraints on the growth of the formal financial institutions in these countries, unless there is some impetus to break through the stalemate. If the formal institutions are pushed against these operational constraints, their commercial viability is threatened. It is this particular aspect of credit transactions that largely explains *both* the failure of the subsidized credit programmes administered through

formal institutions to reach the targeted group and the high loan concentration in the relatively well-off groups which have collateral or reputation at their disposal.

The recent study by Hoff and Stiglitz (1990) advances an explanation for the extreme segmentation of markets in terms of asymmetric access to information on borrowers and the differences in costs of screening, monitoring and contract enforcement across lenders. The formal institutions, even those specifically established for this purpose, faced with high transaction costs, ration out smaller borrowers, farmers and the poor, so as to safeguard their operational viability. The unsatisfied demand for credit of those left out by the formal sector is satisfied by heterogeneous informal lenders. Informal lenders have access at reasonable costs to local information on their borrowers with whom they have social interpersonal relations, thus reducing screening and monitoring costs. Furthermore, tangible assets are not necessarily the only form of collateral since informal lenders are flexible in using other available means/forms for collateral substitute. They could, for example, rely on interlinked credit contracts with other markets (land, labour and product), social group pressures and personal knowledge of borrowers for their risk management and assessment of debt capacity. Their service is far more flexible in loan terms and speed compared with formal institutions. Hence, informal lenders have sizeable comparative advantages over the formal lenders in engaging in small-scale credit transactions because of their lower transaction costs and different ways of handling risk. Informal associations and agents have a competitive edge in small and short-term deposit mobilization. The result is market segmentation and there is no automatic mechanism to integrate these segmented markets.

In examining the applicability of these two hypotheses explaining market segmentation by formal and informal sectors in Sub-Saharan Africa, one can note an interesting conceptual distinction made by Roemer and Jones (1991) between 'fragmented market' and 'parallel market'; parallel markets arise principally to evade government controls and regulations; markets can be fragmented owing to some inherent characteristics of particular market operations, even in the absence of government controls. They suggest that "credit markets in developing countries display characteristics of both parallelism and fragmentation" (p. 8).

Evaluated in this light, it can be said that while parallelism stems mainly from the adoption of repressive policies, fragmentation is more effectively explained by the imperfect information paradigm. If the informal financial sector were strictly a parallel market, its activities would have been reduced by liberalization measures. General evidence from the 1970s and 1980s suggests strongly that liberalization per se cannot overcome the fragmentation of the markets, leading to financial integration.

### III. POLICY REQUIRED TO OVERCOME MARKET FRAGMENTATION

As part of Stabilization-*cum*-Structural Adjustment Programmes, many Governments in Sub-Saharan Africa initiated large-scale restructuring of the financial system in the 1980s. Emphasis in these programmes was placed on the need (i) to adopt financial liberalization measures, i.e. de-controlling interest rates and credit allocation to provide savers and intermediaries sufficient incentives, and (ii) to enhance regulatory and supervisory functions so as to ensure prudence of the financial institutions.

Indeed, alongside a stable macroeconomic environment, adequate prudential supervision and regulation over financial institutions and transactions are now widely recognized as among the prerequisites to successful financial liberalization. In the absence of these conditions and lack of uncoordination with other macroeconomic and trade reform measures, a hasty implementation of financial liberalization can further destabilize the economies, as witnessed by the Southern Cone countries.

However, financial policies in Sub-Saharan Africa should also encompass measures which look into the phase that extends beyond the 'repair' of the financial system and 'restoration' of the solvency of financial institutions. Our studies suggest that liberalization per se has failed to improve the performance of banking institutions in savings mobilization and financial intermediation in any sustainable manner. Difficulties in performing effective intermediation continue to impede further advancement in savings mobilization. In advancing liberalization measures, little attention has been paid to the fact that motivation for increased financial savings at the formal financial institutions is closely related to accessibility to credit facilities

offered. At the same time, the limited lending opportunities considerably dampen efforts for active savings mobilization by the formal institutions. This interrelationship between savings and credit facilities/lending conditions from the perspectives of lenders and savers/borrowers has been neglected in the financial repression hypothesis, where lending opportunities are assumed to abound.

Indeed, financial liberalization policies have hardly addressed the issue of high credit risks and transaction costs -the key constraint facing the banking institutions in their lending operations. This remains the prime cause for the extreme risk aversion and conservatism of many commercial banks as well as the financial distress and illiquidity of many DFIs specializing in development term loans.

As in many other cases of policy reform measures, getting 'prices right' is not sufficient to promote savings mobilization and financial intermediation, unless efficient markets and financial institutions are in place (Collier and Mayer (1989)). Price signals transmitted from shallow markets are inherently unstable and volatile. Furthermore, literature suggests that financial liberalization could result in higher overall intermediation costs in economies where the informal sector has been playing an important intermediation function.

Among the measures addressing institution building, capital market development has become one of the focal points in the recent discussions on financial-sector development. Indeed, the chronic mismatch of liquidity and portfolio positions of different financial institutions calls for the creation and development of inter-bank money markets by which to facilitate rapid and easy realignment of liquidity positions. There are few well-functioning inter-bank money markets in the developing countries. Where they do exist, their operations are dominated by treasury bills and other government short-dated stock, issued as government's short-term deficit financing instruments. Government stocks and bills are treated by financial institutions as almost 'risk-free' assets and often constitute a major components of their liquidity holdings. Other instruments such as CD, commercial papers and inter-bank lines exist in a few countries but are used much less.

However, our research suggests that the gap in the liquidity position of different banking institutions is of a structural nature. It cannot

be eliminated simply by activating short-term inter-bank transactions. Generally, the capacity to generate long-term capital does not emerge spontaneously. In the demise of DFIs, capital markets are seen increasingly as a credible alternative source and mechanism of supporting long-term investment financing. Particularly, in the light of the structural gap in the maturity structure of financial assets in the economies and the shortage of long-term loan provisions, many policy-makers have turned to development of the capital market as a potential conduit for channelling long-term funds into the productive sectors while the banking system provides short-term finance to investors.

Though potentially useful, capital markets take time to develop and mature; they often fail to perform many of the functions ascribed to them in the short-term. The paucity of financial instruments and potential participants inhibits deepening the market. Presently, in many countries, government long-dated securities and bonds tend to be placed outside the market with quasi-public institutions and held to maturity. In most cases, the market in corporate bonds or other private share stocks is at a very incipient stage of development in the economies where the public sector has hitherto dominated. Many family-owned indigenous enterprises are understandably reluctant to go public. Tax policy in favour of deposit income over dividends is also seen as impeding a transfer from the bank-based financial system to the capital market based one.

In terms of sequencing the financial sector development, many argue that the capital market could play its full potential only at the later stage of economic development. For many developing countries in Sub-Saharan Africa, it is unrealistic to expect discernable benefits from capital market development in the immediate future. As policies are introduced to encourage capital markets, the improvement in banking institutions' operation should be given due attention so that the two policies are mutually reinforcing; the economies could eventually benefit from the advantages of both bank-based finance and capital-market-based finance. The capital market development is not a panacea. It should not be seen as a substitute for policies of strengthening banking and other financial institutions through lifting their operational constraints, namely addressing the issue of high credit risks and transaction costs in dealing with small borrowers and savers. This calls for more proactive policies to ease constraints facing bank-

ing institutions in *financial intermediation*. Our discussion shows that such steps could make these institutions more innovative and active in *savings mobilization*. One possible way forward may be to address directly the current state of market fragmentation.

In this regard, it is interesting to note the argument advanced by Biggs (1991), suggesting that market fragmentation per se does not necessarily entail intermediation inefficiency and that market fragmentation could work. This stands in sharp contrast to the popular view that financial dualism can have an adverse impact on economic development, equity and the allocative efficiency of resources<sup>22</sup>. Biggs takes the opposite view: that the benefits of financial dualism could outweigh the cost associated with it.

Citing the experience of Taiwan Province of China, Biggs argues that the decentralization of lending and fragmentation of borrowing groups, to optimize screening and monitoring of loans, can reduce an economy's overall intermediation costs and increase investment efficiency in developing countries with information-imperfect financial markets. The high opportunity cost of investable funds, determined by the market rates prevailing in the curb market, kept the average efficiency of aggregate investment high, and deterred entrepreneurs from undertaking lower yielding investments, even when they had access to cheap bank funds. He concludes that the development of a dualistic financial system -with the formal sector serving 'full-information' borrowers, the informal lenders serving 'information-intensive' borrowers- "helped credit intermediaries allocate funds to 'information-intensive' borrowers at a lower cost and more efficiently than would have been possible if all investable resources were channelled through formal sector banks" (p. 168).

A key to success in Taiwan Province of China in achieving intermediation efficiency in the fragmented markets appears to be dependent on creating conditions both for individual segments to evolve and grow and for effective linkages to develop between them. First the government adopted a deliberate policy to encourage the development of an active informal

---

<sup>22</sup> Chandavakar (1985) address the issue of the impact of the large presence of the informal financial sector on the efficacy of monetary control.

sector (the curb market) as "an efficient adjunct to regulated credit institutions". Secondly, the informal lenders have been adaptive to develop new and innovative instruments for risky projects, and hence, they have extended loans to borrowers without demanding real assets as collateral. Furthermore, while the financial market exhibited a clear dualism into formal and informal segments, demarcated for borrowers depending on the size of their activities, formal credits were available indirectly to smaller borrowers through an extensive subcontracting system. Larger firms offered on-lending facilities such as trade credit or suppliers credit to their subcontractors and suppliers, acting as "de-facto intermediaries". The use of "market interlinkage" and "credit layering" has been instrumental to their success and supportive to industrial growth.

In other Asian countries, "interlinking" of contracts across financial, trade and production transactions and "credit layering" have been used by informal lenders for risk management in rural areas, wherever informal sectors do perform an intermediation role effectively. These techniques help to improve information gathering and contract enforcement. Yotopoulos and Floro (*op. cit.* 1991) report that the informal lending operations with two-tier credit layering, involving traders-lenders (commodity-based) and farmers-lenders (land-based), are extensively used in the rural Philippines.

These experiences in Asia suggest that market segmentation may not be necessarily a sign of inefficiency, or a cause of inefficient intermediation. Market segmentation, however, constitutes a problem when there is total lack of communication or links between the different segments, constraining severely the transmission of price and policy signals across the system. This points to one key condition for a segmented system to work efficiently; namely, there must be linkages, indirect if not direct, between segments.

In low-income African economies, this condition appears to be absent or under-developed. Fig. 6. illustrates the flow of funds (savings and credit) among different economic agents and sectors in these economies. Following the conventional classification adopted in the literature on "dualism", economic activities (the real sector) and financial services (the financial sector) are sub-grouped into the formal (modern) and the informal (traditional) sectors.

The formal financial institutions predominantly provide services to established large-scale "formal" sector activities, many of which, (in parti-



cular, State-owned) have had very low returns and shown poor financial performance. The fiscal record of the governments -beneficiaries of most of the credit from the central banks and whose papers other formal institutions have largely invested in- has been generally dismal, exposed to large external and internal shocks. The performance of many formal institutions has been correspondingly poor. Past attempts to provide credit and loans to the small-scale sectors, through the DFIs and the targeted credit schemes, have largely failed, as little attention was given to the build-up of viable financial institutions (Meyer, 1989, 1991). Thus, the formal financial sector has suffered from a legacy of either conservatism or financial distress. There is at present very little financial flow to the small-scale sector from formal financial institutions (diagonal flows from the upper-left box to the lower-right one in Fig. 6).

The financial needs of 'peripheral' activities of micro enterprises, SMEs and small-scale farmers -upon whom the livelihood of a majority of the population is dependent- are met by heterogeneous informal financial organizations and agents. Multifarious informal financial activities have developed a dynamism of their own, demonstrating flexibility and adaptability to the needs of local communities in which they operate. However, informal financial arrangements are usually organized in a confined local vicinity; hence their intermediation function is often constrained by their limited scale of contacts, subject to highly seasonal funds and highly covariant risks affecting the whole local community.

Consequently, markets and financial flows are largely segmented. Critically, horizontal linkages are weak in both financial and real activities: linkages between the formal and informal financial sectors (between the two upper boxes in Fig. 6) are insubstantial. Since backward -and forward- linkages of economic activities also tend to be weak (between the lower boxes), formal credit fails to reach smaller borrowers through indirect routes such as "credit layering" or subcontracting systems. Thus there is little effective linkage whereby information and funds can flow between segments.

Presently, there is neither a dynamic market force for workable specialization of financial intermediation by sector, nor policies to recognize efficient functioning of the informal sector as intermediaries, i.e. those who could sort borrowers according to 'information intensity' and credit risk. There is no automatic mechanism to integrate the segmented markets into

a coherent system through specialization. Flows of funds take place mostly within an enclave sphere in each sector, i.e. flows are restricted to vertical movements.

In the face of fragmentation -where functional specialization by each sector has not materialized as part of an integrated system to perform efficient mobilization and intermediation- the required policy would be not to deregulate markets in haste, but to work first on closer integration of the informal and formal markets (Roemer and Jones 1991).

Given the positive role played by the informal sector, many today recognize that integration through simple institutionalization (formalization) of informal activities is not appropriate. As suggested by Yotopoulos and Floro (1991), the necessary integration may be achieved several other ways; (i) infusing into the formal institutions some of the flexibility of informal operations; (ii) strengthening the structure and performance of informal market operations; (iii) developing linkages between the formal and informal financial sectors so that the latter becomes a conduit of loanable funds of the formal institutions to reach borrowers otherwise rationed out. Such schemes can lead to improved repayment rates, as informal lenders screen and monitor a smaller group of borrowers on the basis of personal relationships. The development of better linkages could be seen as leading to a financial system where the formal and informal markets could specialize and function complementarily, mutually reinforcing each others' strengths.

This line of thinking has been echoed in several recent studies. For example, the study by Germidis *et al.* (1991) recommends policies of both *integration* of the informal sector into the formal system so as to reduce financial dualism, through in-depth institutional and operational reforms of the latter, and *interlinkage* between the informal and formal sectors, by maximizing the positive and minimizing the negative aspects of each. The objective of developing linkages is defined as to "reduce the gap between the two sectors by promoting closer links between formal and informal operators on a more systematic scale" (p. 214). The informal sector is seen as "a means of retailing formal financial services to areas, sectors or population groups that are difficult to reach". They further propose that integration and interlinkage should be undertaken not only concurrently but somewhat sequentially, arguing that linkage in the short term would en-

train integration in the long term. Development of linkage is viewed as a strategy of "soft integration", a step towards achieving the goal of an integrated and competitive financial system. Indeed, better linkages are also desirable, and required, among institutions and agents within each segment for better intermediation.

This new thinking has begun to replace the traditional approach as a basis for developing innovative financial schemes to provide credit to the SSE and microenterprise sector as well as the small-scale agricultural sector (Levitsky *et al.* 1989, Meyer 1991). In them, credit delivery tends to be linked to savings mobilization. Seibel (1989) proposed a model of linking savings and credit: "as savings without credit lead to demotivation, resource deflection and the inadequate financing of small enterprise, and as credit without preceding savings leads to haphazard loan spending, to risky business ventures and poor repayment morale." (p. 103). Empirical evidence confirms that loan recovery is higher if credit provision originates at least partially in mobilized savings. This basic philosophy has been adopted by many donor agencies and NGOs for instituting grassroots banking (for poverty alleviation) and income-generating programmes (Von Pischke 1991, Holt 1991 and Yaron 1991).

The new experimental schemes tend to adopt other features of informal financial activities such as group formation, replacing traditional tangible collateral requirements with group guarantees and using peer pressure and assessment of reliability based on knowledge of the participants. Many of them also charge commercial-based interest rates to recover, at least partially, operational costs and thus create conditions for self-sustainability of the programmes in the long-run.

The applicability, replicability and long-term viability of these schemes are yet to be tested in Sub-Saharan Africa; several schemes, based on the experience of the Grameen Bank of Bangladesh, have been instituted by NGOs and donor agencies in a few countries (e.g. the Mudzi Fund in Malawi and K-REP in Kenya). However, the schemes are still at an incipient stage and require laborious efforts of committed staff for initiating then developing them into programmes and institutions that are self-sustainable. Many regard these as too specialized to be a part of normal banking operations. Furthermore, the majority of these schemes are at present heavily dependent on financial and technical assistance from external agencies and

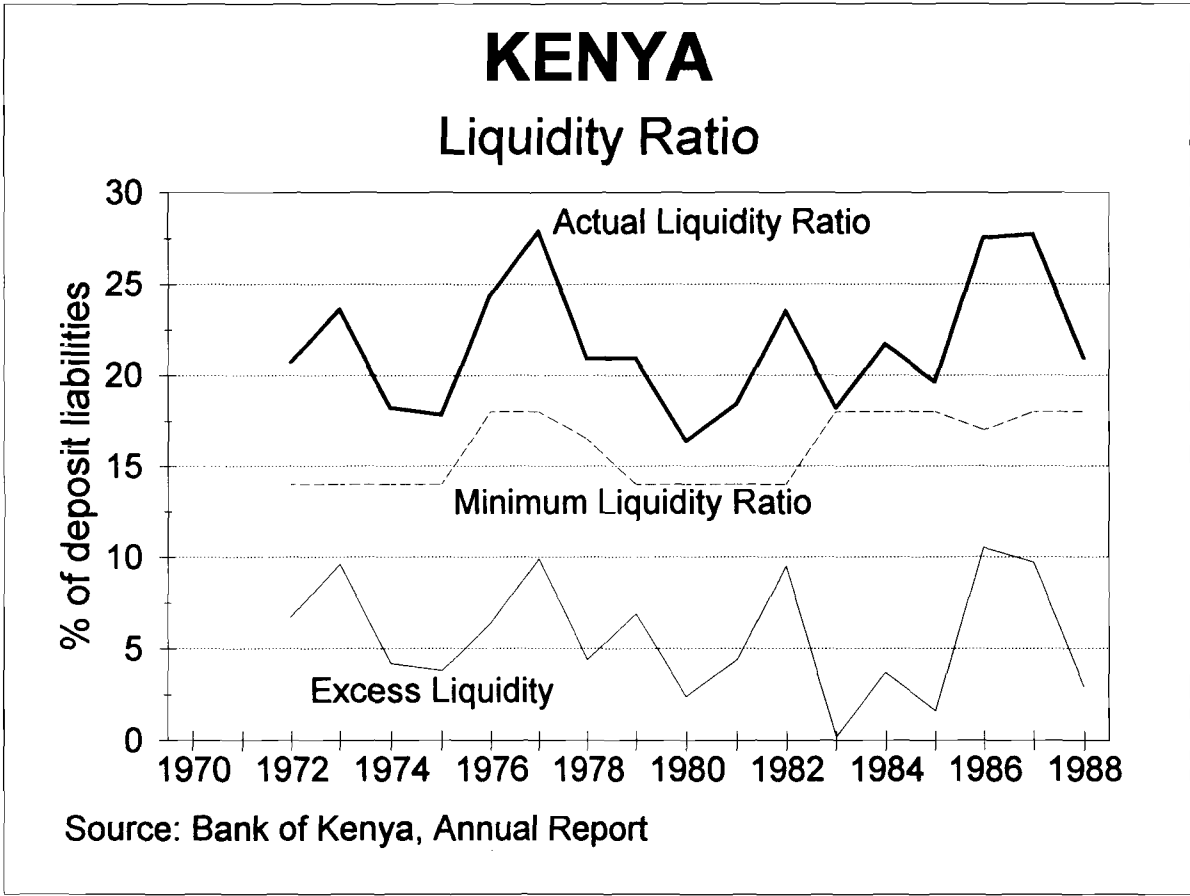
NGOs. They do not perform a function of financial intermediation with locally generated savings. It may take some time before they can form part of countries' integrated financial system.

In many parts of Sub-Saharan Africa, few positive steps have yet been taken in this direction; even a nascent form of linkages in financial intermediation is yet to emerge. Consequently, the economies persistently lack a system of effectively intermediating funds between surplus and deficits units. While integration of the financial system could also be achieved through dynamic growth of the informal sector, a policy of developing financial interlinkage might accelerate financial intermediation and stimulate linkage development between the financial and real sectors as well as among informal and formal financial intermediaries. Whichever policy measures are taken, they should strengthen both existing formal institutions and informal operators by easing their respective operational constraints. This may allow formal financial institutions to engage, without jeopardizing their commercial liability, in broad-based development, meeting the latent demand for credit from the small-scale entrepreneurs and small-holders.

## **ANNEX OF FIGURES**



Fig. 1



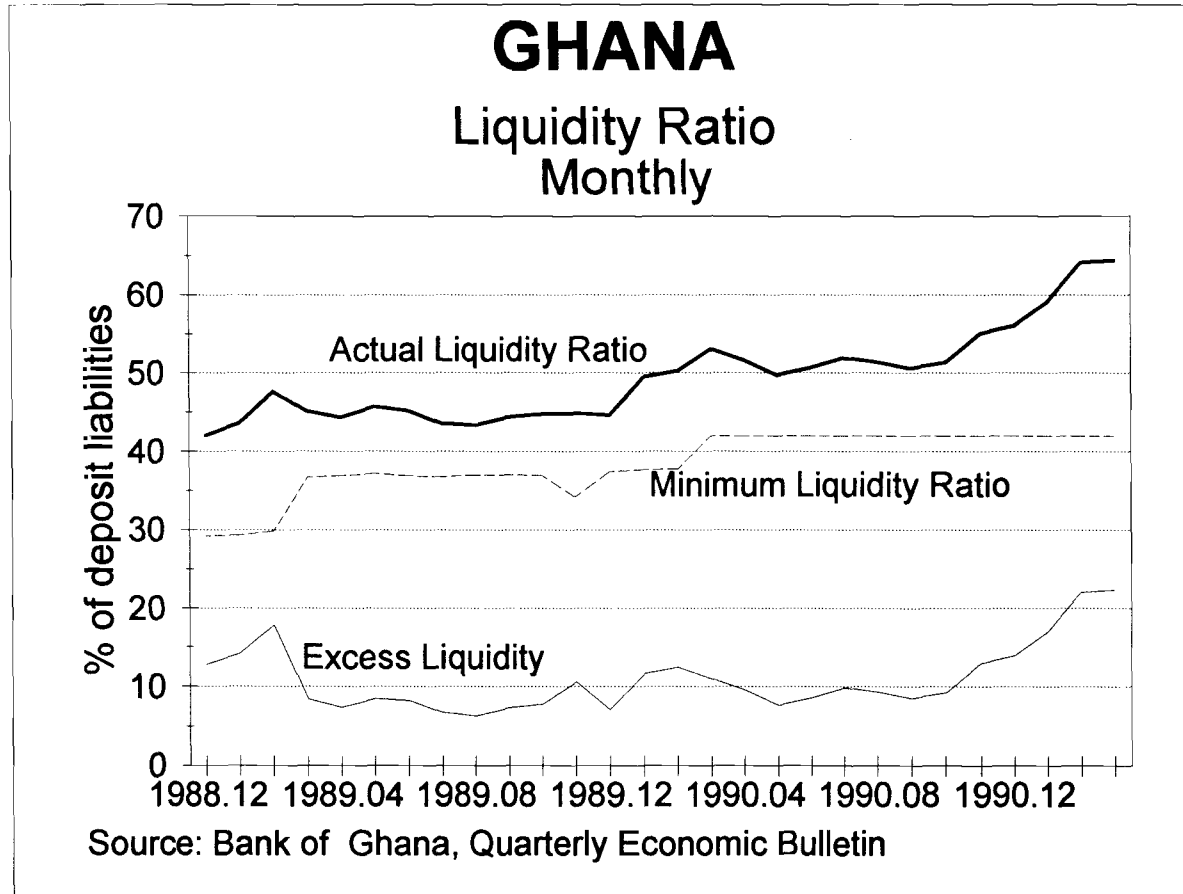
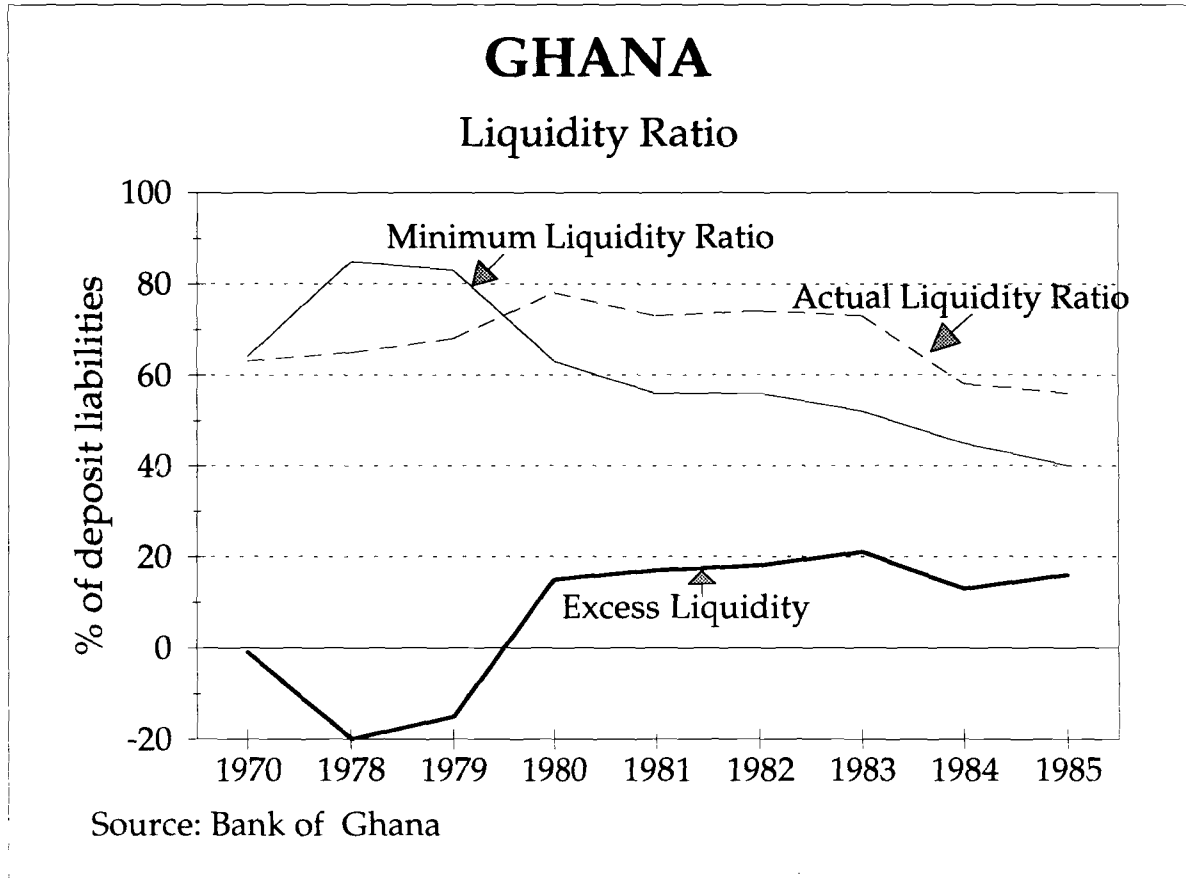


Fig. 2



Fig. 3



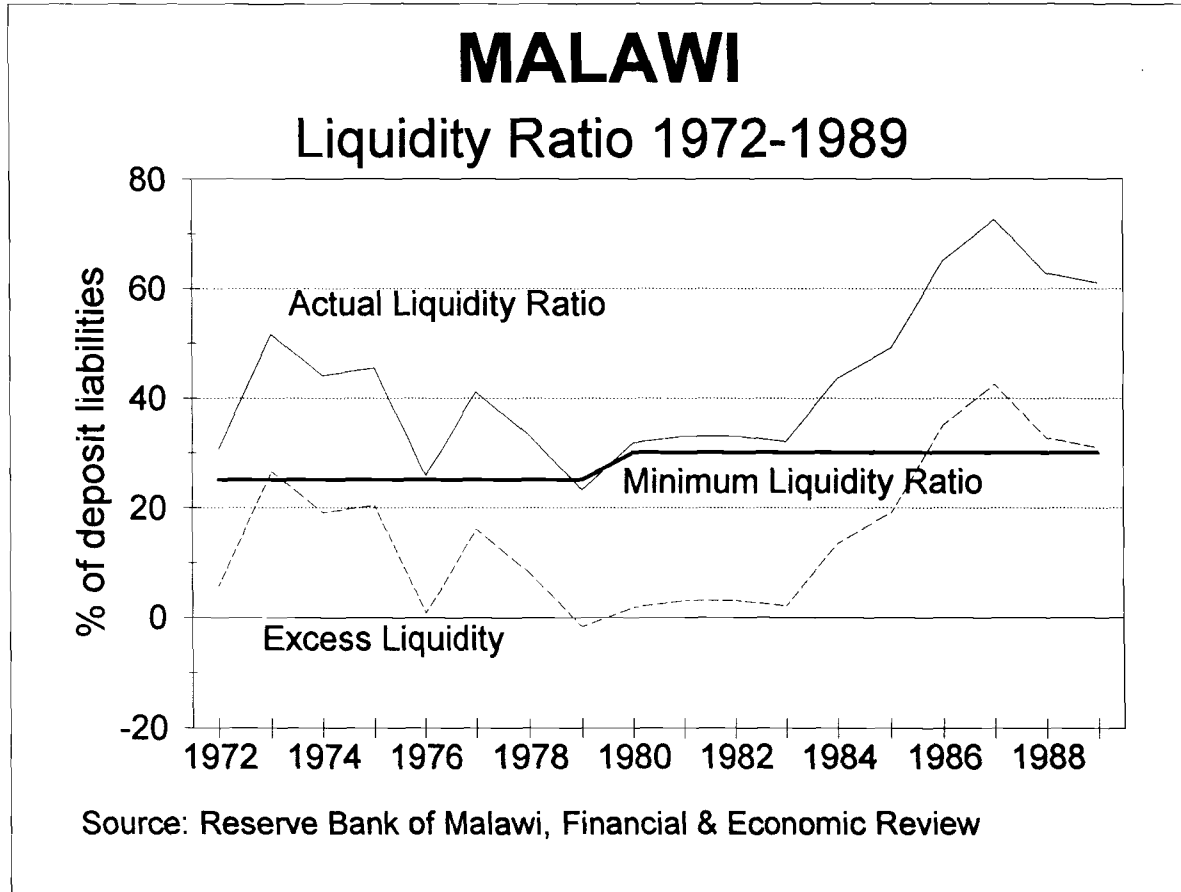


Fig. 4

Fig. 5

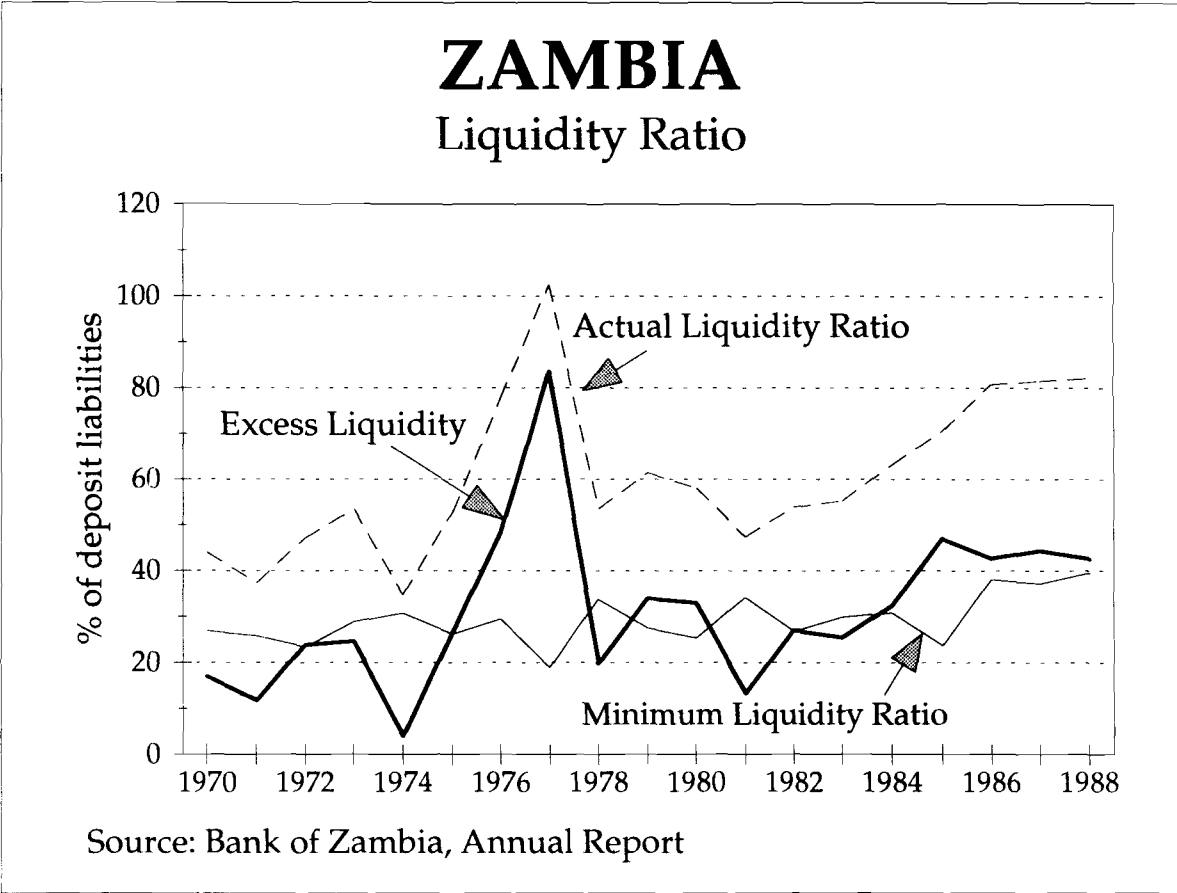
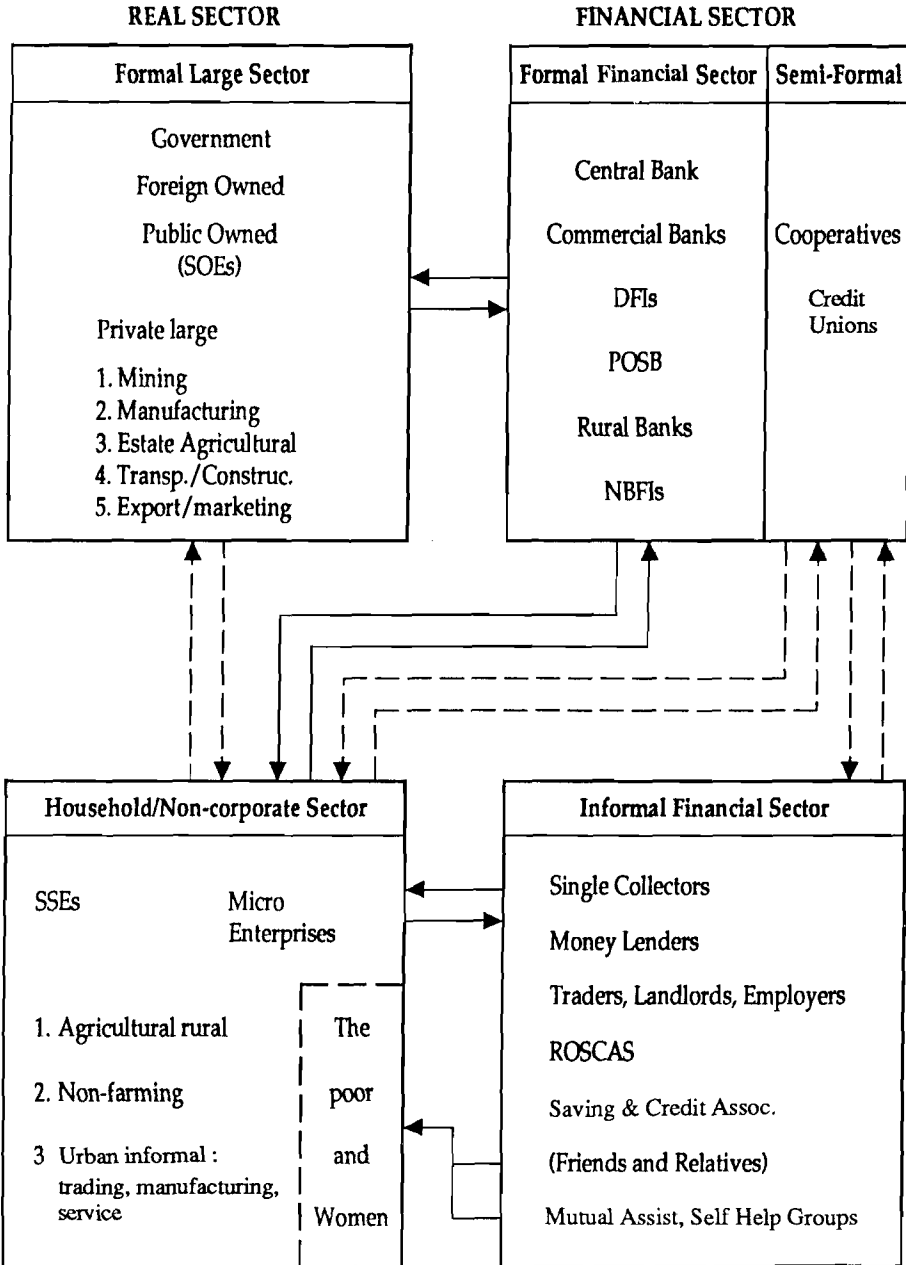


Fig. 6  
**FINANCIAL INTERMEDIATION: FLOW OF SAVINGS AND CREDIT**  
 Financial flows (weak: - - -, strong: ———)



## REFERENCES

- Adam, Christopher. S, William, P. Cavendish and Percy Mistry (1992), "Adjusting Privatization", James Curry Publishing Co.
- Adams, Dale W, Douglas H. Graham, and J.D. Von Pischke (1984), "Undermining Rural Development with Cheap Credit", Westview Press
- Adams, Dale W (1987), "Taking a New Look at Loan Defaults", Economics and Sociology Paper, N<sup>o</sup> 1375, Department of Agricultural Economics and Rural Sociology, Ohio State University, Columbus.
- Adams, Dale W (1991), "Taking a fresh Look at Informal Finance" in Philippe Callier ed, "Financial System and Development in Africa, EDI, World Bank.
- Aryeetey, Ernest, Yaw Asante and Alexander Kyei (1991a), "Domestic Savings Mobilization for African Development and Diversification" (mimeo) International Development Centre, University of Oxford
- Aryeetey, Ernest (1991b), "The Relationship between the Formal and Informal Sectors of the Financial Markets in Ghana," presented at the workshop of the African Economic Research Consortium, Nairobi, May 1991.
- Biggs, Tyler S. (1991). "Heterogeneous Firms and Efficient Financial Intermediation in Taiwan," *Markets in Developing Countries*, eds. Michael Roemer and Chris Jones, ICS Press, San Francisco (forthcoming).
- Caprio Gerard, Jr. and Patrick Honohan (1991), "Excess Liquidity and Monetary Overhangs", World Bank, mimeo.
- Corbo Vittorio and Jaime De Melo (1985), "Overview and Summary", *World Development* Vol. 13, N<sup>o</sup> 8, pp. 863-866.
- Corbo Vittorio and Jaime de Melo (1987), "Lessons from the Southern Cone Policy Reforms", *The World Bank Research Observer*, Vol. 2, N<sup>o</sup> 2.
- Chandavakar, Anand G. (1985), "The Non-Institutional Financial Sector in Developing Countries: Macroeconomic Implications for Savings Policies", *Savings and Development*, N<sup>o</sup> 2, 1985.
- Chandavakar, Anand G. (1989), "Informal Credit Market in Support of Micro business", in Levitsky (ed.) *op. cit.*
- Chipeta, C. and M.L.C. Mkandawire (1991a), "Domestic Savings Mobilization for African Development and Diversification" (mimeo) International Development Centre, University of Oxford.
- Chipeta, C. and M.L.C. Mkandawire (1991), "The Informal Financial Sector

- and Macroeconomic Adjustment in Malawi", African Economic Research Consortium, Research Paper 4.
- Cho Yoon Je and Deena Khatkhate (1989), "Lessons of Financial Liberalization in Asia: Comparative Study", World Bank Discussion Paper, Washington D.C.
- Collier Paul and Colin Mayer (1989), "The Assessment: Financial Liberalization, Financial Systems, and Economic Growth", *Oxford Review of Economic Policy*, Vol. 5, N<sup>o</sup> 4
- Collier Paul and Jan W. Gunning (1991), "Money creation and Financial liberalization in a Socialist Banking System: Tanzania 1983-88", *World Development*, Vol. 19, N<sup>o</sup> 5, pp. 533-538.
- Deaton, Angus (1989), "Saving in Developing Countries: theory and review", paper presented at the First Annual World Bank Conference on Economic Development, Washington, April 1989.
- Fry, Maxwell J. (1982), "Models of Financial Repressed Developing Economies", *World Development*, Vol. 10, N<sup>o</sup> 9, pp. 731-750
- Fry, Maxwell J.(1988), "Money, Interest, and Banking in Economic Development", The John Hopkins University Press, Baltimore and London.
- Germidis, Dimitri, Denis Kessler and Rachel Meghir (1991), "Financial Systems and Development: What Role for the Formal and Informal Financial Sectors?", OECD, Development Centre Studies. OECD, Paris.
- Ghate, P.B. (1990), "Interaction Between The Formal and Informal Financial Sectors", paper presented for United Nations International Conference on Savings and Credit for Development, 28-31 May 1990.
- Hoff, Karla and Joseph E. Stiglitz (1990), "Imperfect Information and Rural Credit Markets-Puzzles and Policy Perspectives", *The World Bank Economic Review*, Vol. 4, Number 3.
- Holt Sharon (1991), "Village Banking" (mimeo) World Bank, Washington
- Kitchen, Richard L. (1986), "Finance for the Developing Countries", Chichester, John Wiley and Sons.
- Levitsky, Jacob (1989) *et al*, "Microenterprises in Developing Countries", Intermediate Technology Publications, 1989, London.
- McKinnon, Ronald I. (1973), "Money and Capital in Economic Development", The Brookings Institution, Washington, D.C.
- Meyer, Richard (1989), "Financial Services for Microenterprise: Programmes or Markets?", in Levitsky (ed.) *op.cit*.

- Meyer, Richard (1991), "Rural Finance Research: Priorities, Dissemination and Policy Impact", Paper presented at the Vth SACRED Meetings, FAO, Rome.
- Meyer, Richard L. and Carlos E. Cuevas (1990), "Reducing the Transaction Costs of Financial Intermediation: Theory and Innovations", paper presented at the International Conference on Savings and Credit for Development, Copenhagen, 28-31 May, 1990
- Mutukwa Mbelo (1991), "Mobilizing Domestic Savings for African Development and Diversification: Case Study of Zambia" (mimeo) International Development Centre
- Mwega, Francis (1991), "Domestic Savings Mobilization for African Development and Diversification" (mimeo) International Development Centre, University of Oxford.
- Nissanke, Machiko (1991), "Theoretical Issues on Finance and Development: A Critical Literature Survey", Queen Elizabeth House Working Papers, June 1991
- Nissanke, Machiko (1991a), "Liberalization Experience and Structural Impediments to Savings Mobilization and Financial Intermediation" (mimeo) International Development Centre, University of Oxford
- Nissanke, Machiko (1992a), "Excess Liquidity in the Banking System in SSA" (mimeo) International Development Centre, Oxford University, March 1992
- Roemer, Michael and Christine Jones (1991), "Markets in Developing Countries: Parallel, Fragmented, and Black", International Centre for Economic Growth, HIID, ICS Press
- Seibel, Hans Dieter (1989), "Linking Informal and Formal Financial Institutions in Africa and Asia", in Levitsky (ed.) *op. cit.*
- Shaw, Edward S. (1973), "Financial Deepening in Economic Development", Oxford University Press, New York.
- Stiglitz, Joseph E. (1989), "Financial Markets and Development", *Oxford Review of Economic Policy*, Vol. 5, N<sup>o</sup> 4.
- Stiglitz, Joseph E. and Andrew Weiss (1981), "Credit Rationing in Markets with Imperfect Information", *American Economic Review* 71.
- UNCTAD (1992), Trade and Development Report 1992.
- Von Pischke, J.D. (1991), "Finance at the Frontier", the World Bank EDI Publication, Washington

- World Bank (1989), "World Development Report 1989: Financial Systems and Development", New York, Oxford University Press
- Yaron, Jacob (1991), "Successful Rural Finance Institutions", World Bank Discussion Papers N° 150.
- Yotopoulos, Pan A. and Sagrario L. Floro (1991), "Transaction Costs and Quantity Rationing in the Informal Credit Markets: Philippine Agriculture", (in Roemer and Jones (1991, *op. cit*)).



# **THE INDONESIAN EXPERIENCE WITH FINANCIAL-SECTOR REFORM**

Donald P. Hanna (\*)

---

(\*)The views expressed are the author's and not necessarily those of the World Bank. Inneke Herawati provided indispensable word-processing support.



# CONTENTS

INTRODUCTION .....	153
I. THE 1983 FINANCIAL REFORMS: BACKGROUND AND CONTENT .....	154
1. Macroeconomic Background .....	154
2. Financial Sector Pre-reform Structure .....	156
3. Financial Repression .....	157
4. Macroeconomic Pressures for Reform .....	162
5. The First Financial Sector Reforms .....	163
II. THE 1988-91 FINANCIAL REFORMS: BACKGROUND AND CONTENT .....	164
1. The Macroeconomic Background .....	164
2. The 1988-91 Financial Reforms .....	165
3. Summary of Reforms .....	167
III. EFFECTS OF THE FINANCIAL REFORMS .....	168
1. Effects on the Financial System .....	168
a) Financial Deepening and Interest Rates .....	169
b) Maturity Structure .....	172
c) Bank Cost Efficiency, Allocative Efficiency & Risk .....	173
i. Cost Efficiency .....	174
ii. Bank Margins and Profitability and Efficiency .....	174
iii. Credit Allocation and Risk .....	178
iv. Loan Pricing and Default Risk .....	179
v. Efficiency and Return on Investment at Firms .....	182
vi. Risks from New Operations .....	183
vii. Liquidity Risk .....	183
viii. Summary of Banking Efficiency and Risk .....	185
2. Real Effects of Financial Reform .....	186
a) Savings .....	186
b) Investment .....	191
3. Macroeconomic Conditions and Financial Reform .....	192
IV. CONCLUSIONS .....	194
BIBLIOGRAPHY .....	196



## INTRODUCTION

Maintaining growth and development of the real economy requires a complementary growth of the financial system capable of providing indispensable financial resources to the growing markets as cheaply and efficiently as possible. For some time, Indonesia has been engaged in serious efforts to stimulate the domestic financial system, and thereby economic growth, through major policy packages in 1983, 1988, 1990 and 1991. This paper begins with a discussion of the nature of the specific reforms carried out in Indonesia, the environment in which they were undertaken and, most importantly, their effects on the real economy.

Theories of the link between financial performance and economic growth, particularly as advanced by McKinnon (1973), and Shaw (1973) have been the basis for a series of financial reforms around the world, most prominently in the Southern Cone of Latin America, but also in Turkey, parts of Africa and East Asia, including Indonesia. These experiences have raised concerns about the real sector effects of financial reforms, particularly with regard to the freeing of interest rates and their effects on savings and investment<sup>1</sup>. Various authors analyzing this experience have focused

---

<sup>1</sup> Van Wijnbergen (1983) and Taylor (1983) present an argument based on the efficiency of the curb market and the effects of interest rates on the supply of goods (through the cost of working capital) whereby freeing interest rates may not lead to growth. These arguments turn on empirical magnitudes that need to be evaluated for each case. Other prominent debates concern the timing and sequencing of financial reforms, the content of reforms and the nature of financial-market supervision. See for example Edwards (1984), Caprio and Atiyas (1992).

on the need to avoid severe macro-imbalances as a precondition for successful financial reform because of the reduced likelihood of engendering high *ex post* real interest rates and the risk of currency substitution exacerbating any fiscal imbalance (Hanson, 1992). Others have cited the examples of the Southern Cone as warnings of the dangers of opening the capital account before the current account (McKinnon, 1973, 1982; Edwards, 1984; Khan and Zahler, 1983). Others have argued that the timing should be simultaneous (Little, et al. 1970; Krueger, 1981 and Michaely, 1986, cited in Hanson 1992). After discussing the nature of the financial reforms implemented in Indonesia over the last decade, this paper addresses their effects on the real economy and on the financial system itself. Questions analyzed include:

- The effect on the financial system itself, including asset growth, maturity structure, spreads, profitability and interest rates and risk;
- The effects on the level of investment and savings;
- The impact of the macroeconomic environment on financial reform;
- The sequencing of financial reform, in particular the opening of the financial system in the presence of a closed current account and an open capital account.

## I. THE 1983 FINANCIAL REFORMS: BACKGROUND AND CONTENT

### 1. Macroeconomic Background

Indonesia began the 1980s as a high growth, low-income country heavily dependent on oil (Table 1)<sup>2</sup>. Growth had averaged 7.6 per cent through the 1970s, while inflation, low in the early part of the decade, had picked up to levels over 40 per cent in 1974 before falling to the 10-20 per cent range for the rest of the decade. Revenues from oil, which accounted for up to 80 per cent of exports, kept the current account balance positive

<sup>2</sup> For an excellent overview of the Indonesian economy, with a focus on international debt, see Woo and Nasution (1989).

or at a mild deficit. Oil revenues from the State-owned oil monopoly, Pertamina, also accounted for as much as 70 per cent of budgetary revenues, keeping the domestic tax effort low. A period of hyperinflation in the mid-1960s had led to the imposition of a policy that eschewed domestic-bond financing of the government budget. The same concern over inflation led to the adoption of an open capital account in 1970, whereby all movements of capital by the non-financial private sector into and out of the country were completely unrestricted. Only banks and public enterprises faced restrictions on the amount of foreign lending they could undertake. A debt crisis in 1975 brought on by irresponsible borrowing by Pertamina led to tight controls over public-enterprise borrowing and a strong desire by the Indonesian government to limit its external debt burden. The crisis helped Indonesia avoid the external debt build-ups that plagued many other middle- and low-income oil producers in the late 1970s and early 1980s.

Government revenues were used throughout the 1970s to promote key domestic industries, usually State-owned, behind a barrier of tariffs and quantitative restrictions. Oil inflows created a Dutch disease problem during the 1970s that Indonesia attempted to counter in 1978 by devaluating its fixed exchange rate. Although non-oil exports initially responded positively (Woo and Nasution, 1989), inflation in the intervening period, however, led to continued appreciation of the rupiah.

Table 1  
KEY MACROECONOMIC INDICATORS (a)

	75-83	83-87	88-89	1990	1991
Average real growth rates (% p.a.)					
GDP	6.5	5.0	6.6	7.1	6.6
Non-oil GDP	7.0	5.7	7.8	7.5	6.3
Non-oil exports	10.5	12.2	17.8	2.8	24.3
Non-oil imports	13.8	-8.2	12.7	26.0	9.6
Fixed investment	10.7	-3.7	11.9	14.6	6.0
Macroeconomic balances (%) (b)					
Current account/GNP	-7.8 (d)	-2.5	-1.9	-3.4	3.8
Non-interest current account/GNP	-6.0 (d)	2.0	2.3	0.4	0.3
Overall public sector balance/GDP	-4.3 (d)	-3.0 (e)	-2.1 (e)	0.2 (e)	-0.4 (e)
MLT debt service/exports	16.8 (d)	34.8	35.8	29.7	31.6
MLT debt/exports	127.6	234.3	212.2	187.6	196.5
MLT debt/GNP	33.1	65.5	60.1	57.8	59.0

Table 1 (Cont.)

	75-83	83-87	88-89	1990	1991
<i>Structure of the economy (%) (b)</i>					
Non-oil manufacturing/GDP	9.9	12.8	13.9	14.9	15.4
Non-oil exports/non-oil imports	37.4	80.8	88.8	71.2	77.5
Public savings/GDP	8.9	4.8	6.4	10.2	9.4
National savings/GDP	21.0	19.1	20.9	20.9	20.3
Fixed investment/GDP	25.1	19.2	20.6	22.5	22.7
Private fixed investment/total fixed investment	52.1	59.2	58.7	59.0	57.7
Consumption/GDP	73.9	75.6	74.2	74.2	75.0
<i>Prices</i>					
Oil prices (US\$/bbl) (b)	28.9	17.6	17.9	22.6	18.7
Non-oil terms of trade (83/84 = 100) (b)	100.0	96.3	95.3	95.3	91.5
Domestic inflation (% p.a.) (b) (c)	16.2	7.9	6.7	7.9	9.4

(a) Balance of payments and fiscal data are for fiscal years (starting April 1). Other indicators are for calendar years.

(b) For last year of multi-year periods.

(c) As measured by the consumer price index, with an adjustment for rice prices during 1987-89; yearly average.

(d) For 1982/83.

(e) Calendar year.

Source: Central Bureau of Statistics.

## 2. Financial Sector Pre-reform Structure

Indonesia's financial system at the beginning of the 1980s was typical of most developing countries (Nasution, 1983; Balino and Sundarajan, 1986). Finance was dominated by commercial banks, which accounted for 95 per cent of financial assets (Table 2). Banking was dominated by five State commercial banks which, along with the Bank of Indonesia (BI) the central commercial bank, controlled 80 per cent of financial assets. State banks had a number of advantages, including extensive branch networks, access to BI, and the exclusive right to receive public-enterprise deposits.

The other 15 per cent of the banking systems assets were in the hands of 21 banks authorized to operate in foreign exchange (11 foreign and 10 domestic), 60 private domestic banks limited to rupiah operations and 29 development banks. Private banks had grown during the 1970s after having been outlawed in the early 1960s. They were hampered, however, by res-



trictions on branching and access to BI as well as to public enterprises. Domestic private banks were nonetheless favoured over foreign banks which operated without access to BI credit and were limited to a maximum of two branches. Two national and twenty-six development banks, all but one State-owned, provided some long-term financing with funds from the public and multilateral banks. In addition, an extensive rural financial system operated through thousands of very small village banks which were precluded from offering demand deposits. Other institutions in the financial system played a very minor role. Some 13 non-bank financial institutions had been set up in the early 1970s to promote investment banking and the stock market. Their activities were funded through the issuance of certificates of deposit (CDs), purchased by commercial banks, and through equity, again chiefly supplied by the state banks and BI. A domestic stock market, revived in 1977, was moribund. By 1982 only 24 companies had issued shares, mostly foreign-owned ones seeking to comply with investment laws requiring gradual sales of equity to Indonesians. A few bond issues had also been floated in the market, but overall the funds raised in the capital market amounted to only 1.7 per cent of financial assets in 1982. Insurance companies and pension funds were small, keeping what assets they had in land or short-term deposits.

### **3. Financial Repression**

Recycling oil revenues within Indonesia in the 1970s led to an elaborate system of directed, subsidized credit, known in the country as liquidity credit, that accounted for 48 per cent of all bank lending by 1982 (Table 3). Refinancing by BI at subsidized rates was plentiful so long as the loans met the criteria for any of a myriad of directed credit schemes. Schemes targeted small-scale firms, farmers, transmigrants, home owners and public enterprises. Terms varied, with the portion of a loan eligible for refinancing varying from 20 per cent to 100 per cent and the rediscount interest rates from one-third to one-half of the subsidized rate paid by the final borrower. The bulk of refinancing was provided through State banks which granted loans on the credit at rates of 6 to 12 per cent. Refinancing was the chief source of funding for State banks since, despite the open capital account, their interest rates on deposits of over 3 months were controlled by BI

Table 2  
**STRUCTURE AND GROWTH OF THE INDONESIAN FINANCIAL SYSTEM**  
(number, billions of rupiah and %)

	Number			Nominal Asset Size			Real Growth			
	1982	1988	1991	1982	1988	1991	1978-82	1982-88	1988-91	1990-91
Bank of Indonesia	1	1	1	13,707	42,445	55,220	1.4	10.8	0.5	2.4
DMB	118	111	185	17,105	65,693	159,392	8.7	14.4	21.3	6.4
State	5	5	5	12,257	39,862	70,158	1.8	11.6	10.6	-1.5
Private FX	10	12	23	1,168	10,189	45,654	23.7	28.1	41.7	10.7
Foreign	11	11	29	1,172	3,215	12,070	-2.6	8.8	35.8	11.6
Non-FX Private	60	51	96	720	4,972	12,868	22.5	24.2	23.4	7.8
Development	29	29	29	1,336	5,046	14,505	8.8	14.1	26.9	25.3
Savings Bank	3	3	3	452	2,409	4,137	57.4	19.8	9.8	20.2
Other (a)	113	209	276	1,447	6,681	N.A.	N.A.	17.5	N.A.	N.A.
Rural banks (b)	5,808	5,783	6,243	86	637	N.A.	19.5	25.3	N.A.	N.A.
Total (c)	6,040	6,104	6,954	32,345	115,456	225,575	6.2	13.2	14.1	4.6

(a) Comprises NBFIs, insurance and leasing companies. The nbfi data are as of March 1991.

(b) Village and Urban Peoples Credit Banks (BPRs).

(c) Totals reflect previous year stocks for those categories for which 1991 data is unavailable.

Source: Bank of Indonesia.

(Table 4). Private banks, on the other hand, were not subject to interest-rate controls, neither on deposits nor on loans. As a result, private banks offered deposit rates two to three times higher than State banks.

Table 3  
LIQUIDITY CREDITS  
(billions of rupiahs; end of period)

	Mar 1983	Mar 1985	Mar 1988	Mar 1990	Mar 1991	Mar 1992
State Banks						
Liquidity Credit (LC)	3,876	6,426	9,176	13,873	10,807	12,048
LC/State Bank Credit	43.8	46.7	10.1	32.6	19.8	19.5
State Bank LC/All LC	92.2	93.6	89.0	79.5	82.7	87.5
Private National Banks						
Liquidity Credit	208	298	753	2,602	1,693	1,280
LC Share (%)	15.4	9.1	9.2	11.5	4.8	3.0
LC/All Bank Credit	1.8	1.6	2.2	3.7	1.7	1.1
All Banks						
Liquidity Credit	4,203	6,862	10,311	17,451	13,061	137,68
LC Share (%)	37.1	36.8	30.7	24.6	13.1	11.9

Source: Bank of Indonesia.

Table 4  
INTEREST RATES AT COMMERCIAL BANKS, 1982-91 (a)  
(annual %)

December of	1982	1985	1986	1987	1988	1989	1990	1991
Nominal Deposit Rates (b)								
State Banks	6.0	16.0	14.7	17.3	18.2	17.2	19.4	22.3
Private FX Banks	18.5	17.8	15.5	18.5	19.6	18.2	20.0	23.3
All Banks	NA	16.9	15.4	18.4	19.0	17.7	19.6	22.7
Ex post Real Deposit Rates (c)								
State Banks	-3.4	9.0	6.4	10.6	9.1	6.5	11.2	16.1
Private FX Banks	8.0	10.7	7.1	11.7	10.4	7.5	11.7	17.1
All Banks	N.A.	9.9	7.1	11.6	9.9	7.0	11.4	16.5
Nominal Lending Rates (d)								
State Banks	12.0	15.3	18.5	20.0	20.2	19.7	21.2	25.1
Private FX Banks	N.A.	24.2	23.02	3.6	23.8	21.7	25.1	28.2
All Banks	N.A.	22.1	21.12	2.1	22.3	21.0	23.0	26.1

Table 4 (Cont.)

December of	1982	1985	1986	1987	1988	1989	1990	1991
Ex post Real Lending Rates (c)								
State Banks	2.1	8.4	9.9	13.1	11.0	8.8	12.8	18.8
Private FX Banks	N.A.	16.7	14.1	16.5	14.3	10.6	16.5	21.7
Interest Rate Spreads								
Lending-Deposit Spread (d)								
State Banks	5.7	-0.6	3.3	2.3	1.7	2.1	1.5	2.3
Private FX Banks	N.A.	5.4	6.5	4.3	3.5	3.0	4.3	4.0
All Banks	N.A.	4.4	4.9	3.1	2.8	2.8	2.8	2.8
On-shore Off-shore								
Dollar Spread (e)	0.9	-0.5	-0.0	1.0	1.9	-0.0	0.3	2.5
On-Shore Rupiah On-Shore								
Dollar (e)	3.4	9.0	8.1	9.3	8.5	9.2	11.0	14.6
On-shore Rupiah-LIBOR (e)	4.3	8.4	8.1	10.4	10.6	9.1	11.4	17.4
Memo Items:								
Annualized Semester								
CPI Inflation	9.7	6.4	7.8	6.1	8.3	10.0	7.4	6.2
6 Month US Dollar LIBOR	13.6	8.6	6.9	7.3	8.1	8.3	7.8	4.6
6 Month On-shore								
US Dollar Rate (f)	14.6	8.1	6.8	8.4	10.2	8.3	8.1	7.2

(a) For rupiah transactions, excluding liquidity credits. Rates shown include all outstanding loans or time deposits, not marginal rates.

(b) Average rate for six-month time deposits.

(c) Rate calculated using the actual annualized semester inflation as proxy for expected inflation.

(d) Average nominal rate on working capital loans. Because of long credit maturities, the average shown responds slowly to current rates. Thus the lending rates cannot be directly compared with the deposit rate.

(e) Spread calculated using Private FX bank on-shore rates.

(f) Rate on offer at Private FX banks.

Source: Bank of Indonesia and author's calculations.

In addition to the direction of credit through its extensive refinancing program, BI also set individual limits on credit expansion for each bank, thereby influencing the allocation of almost all credit (Table 5). Aggregate and subsector limits on credit growth had started as a means of controlling the money supply, since policy makers felt that relying on a fractional reserve system in the face of an open capital account and significant cross border flows would be ineffective. Of course a system of credit control did not protect against the effects of loose domestic monetary policy, which still led to periodic losses of international reserves. It did, however, insu-

late the domestic financial system from large foreign exchange inflows (the main concern of policy makers during the period of oil wealth), since these could not be transformed into credit.

Table 5  
SECTORAL SHARES & GROWTH OF CREDIT AND GDP  
(%)

	1982	1988	1991	Growth 88-91
<b>Share of Total Bank Credit</b>				
Agriculture	8.7	8.4	7.6	34.2
Mining	16.0	1.2	0.6	17.1
Manufacturing	24.9	33.3	31.2	35.1
Trade	31.4	30.8	29.5	35.9
Services	14.2	16.5	17.7	39.8
Others	4.8	9.9	13.4	47.3
<b>Share of GDP</b>				
Agriculture	24.1	24.1	19.3	8.8
Mining	19.5	11.6	12.4	18.5
Manufacturing	12.0	18.5	21.8	21.6
Trade	15.9	17.3	17.5	16.4
Services	24.8	24.6	25.6	17.5
Others	3.7	3.8	3.3	11.2
<b>Memo items:</b>				
Total Credit (trillions of rupiahs)	10.3	32.8	100.4	
Total GDP (trillions of rupiahs)	62.5	139.5	226.5	

Source: Bank of Indonesia, Central Bureau of Statistics.

The elaborate system of credit allocation ultimately thwarted government objectives and reduced efficiency. From the perspective of the government, the plethora of programs and lack of prioritization makes it difficult to judge whether the allocation of credit that ensued was desirable. The large loan subsidies encouraged a misdirection of funds, shortchanging intended beneficiaries. From the standpoint of efficiency, the subsidized rates encouraged financing of low-return projects, or ones with levels of capital intensity inappropriate for a low-wage, labor-surplus country. Equalization of the marginal efficiency of investment across sectors, a partial measure of allocative efficiency, was hindered by the targeted nature of directed

credit. The existence of high percentages of rediscount and subsidized credit insurance from a State-owned insurance company weakened the incentive of State banks to choose viable projects or to supervise them once funded. Woo and Nasution (1989) point out that State banks rarely met their credit goals, a result that they hypothesize may have been due to large bribes called for by these banks, bribes that raised the cost of State-bank credit above that of private banks.

For the State banks, the existence of credit ceilings together with controls on deposit and lending rates weakened the incentive to aggressively seek deposits. Private domestic banks, operating without interest-rate restrictions, showed faster growth than State banks. Because of generous credit ceilings, private banks were able to increase assets at a real rate of over 20 per cent per year between 1978 and 1981 (Table 2). State banks, though showing real growth of less than 2 per cent, were still able to collect enough funds to develop high levels of excess reserves. These reserves were either converted via foreign exchange as a hedge against devaluation or lent out to private banks in the interbank money market.

The combination of extensive State ownership, interest and credit controls and entry barriers led to financial markets that were highly segregated (Harris, et al., 1992). Public enterprises banked with the State banks, whose extensive branch network gave them advantages in raising funds. Large conglomerates, fostered in the hot-house of trade protection, were also customers of the State banks. These banks therefore provided almost all of industry's funding. Besides the fragmentation of internal markets, different groups had varying degrees of access to foreign financing. Of the private firms, the large conglomerates had the best access to foreign borrowing. Chinese-owned firms sometimes had access to foreign funds through offshore Chinese banking links with Hong Kong and Singapore.

#### 4. Macroeconomic Pressures for Reform

By 1982, the worsening price of oil and world-wide recession had undermined Indonesia's balance of payments and fiscal balance, thus prompting a series of macroeconomic adjustments. The current-account deficit had reached 7.8 per cent of GDP, while oil-tax receipts had fallen 13 per cent in real terms during the fiscal year (April to March).

One of the most important steps taken was a devaluation of the rupiah by 38 per cent in March 1983, which brought the real exchange rate back to its 1978 level, when the last devaluation had occurred. This was undertaken to spur non-oil exports, which had responded well to the 1978 devaluation, and to increase rupiah revenues in the budget.

The devaluation was coupled with a series of fiscal adjustments to make it stick. These involved cuts in current expenditures and reductions in domestic subsidies to oil, public enterprises and food. This was reinforced by delaying or cancelling dozens of large public-sector projects, including four multi-billion-dollar petrochemical projects planned by Pertamina. Efforts at increasing domestic tax collections were also undertaken.

## 5. The First Financial-Sector Reforms

The fall in oil revenues played havoc with the old structure of the financial system that had relied on significant recycling of the government's oil revenues through the banking system. Policy makers began to focus on the need to promote the mobilization of domestic savings to maintain investment in face of tightening external constraint. There was also growing concern about the need to provide banks with more flexibility in the allocation of credit, with the goal of increasing the efficiency of its use.

The reform process began in August 1982 as BI cut back on the provision of directed credits for some low-priority sectors. This was followed in June 1983 by more substantial reductions in the utilization of directed credits to 14 "priority areas" and a hike in their interest rates to 12 per cent. BI also moved to limit its direct credit to the public, relying instead on refinancing. At the same time, the bank announced the elimination of ceilings on lending rates at State banks, except for directed credits. Interest rates on time deposits longer than six months were also freed<sup>3</sup>. Further efforts to mobilize domestic funds included the authorization of bearer CDs and the elimination of a 20 per cent withholding tax on domestic dollar deposits. Finally, and most importantly, BI eliminated all credit ceilings.

<sup>3</sup> This was followed several months later by the elimination of limits on six-month time deposits, so that only savings deposits continued to have interest-rate ceilings.

Although these bold reforms greatly increased the flexibility of existing banks in pricing and allocating credit, they stopped short of lowering entry barriers, either among banks or between banks and other financial institutions. No new foreign banks were allowed entry, nor were new licenses for foreign exchange operations issued. The opening of new branches continued to be severely constrained, giving State banks a clear advantage that was further solidified by their having sole possession of State enterprise business.

## **II. THE 1988-91 FINANCIAL REFORMS: BACKGROUND AND CONTENT**

### **1. The Macroeconomic Background**

The move to lower entry barriers was to take five years. In the intervening time Indonesia's external environment improved in 1984-85 and then worsened considerably, with the 1986 plunge of the price of oil and the appreciation of the yen both pushing the current account into the red. As in 1983, the Indonesian authorities responded with a combination of exchange-rate and fiscal policies to restore the balance of payments. Real current government expenditures were cut through a salary freeze, subsidies were reduced and capital spending slowed. Another sharp devaluation was announced in September 1986, lowering the value of the rupiah by 50 per cent. In response to the stabilization program, Indonesia was also able to step up its aid program, with large amounts of balance-of-payments support coming from the World Bank, the Asian Development Bank and Japan.

Unlike the 1983 crisis, this time stabilization efforts were coupled with trade-reform measures. This began in 1985 with a reduction in the dispersion of tariff rates. A duty-drawback system for exports was revamped in May 1986. More reforms accompanied the 1986 devaluation, setting a pattern of replacing non-tariff barriers with tariffs which were subsequently lowered. In an effort to attract foreign investment, licensing requirements were simplified in 1987. By 1991, a series of almost annual trade-reform packages had succeeded in sharply lowering export bias and variance in the trade regime and broadening the scope and ease of foreign direct investment.



Stabilization and trade reform left the Indonesian economy in a different position in 1988 than it had been at the advent of financial reforms in 1983. Inflation had been kept under 10 per cent, helped by the trade reform that created more effective competition from imports. Strong efforts to reform the domestic tax system and increase collections, coupled with austere spending, had helped keep the fiscal deficit below 4 per cent of GDP (except for 1986) despite the decline in oil revenue (Table 1). Strong export growth had reduced the dependence of the trade account on oil. Nevertheless, the debt burden had increased, both because of yen appreciation and because of larger current account deficits (Table 1).

## 2. The 1988-91 Financial Reforms

Having confronted the stabilization challenge of 1986, attention turned once again to the financial sector in October 1988. The government announced a far-reaching set of reforms, quickly termed PAKTO (the October Package) that dramatically lowered entry barriers to financing:

- Banking licenses were made available to new banks that could meet new minimum capital requirements.
- The process for obtaining a foreign-exchange license was simplified.
- Freer branching by domestic banks was allowed so long as standards of prudential soundness were met.
- Foreign joint-venture banks were authorized, with an extended branching network.
- Limitations on the activities of banks and non-banks were lessened.
- State enterprises were allowed to hold up to 50 per cent of their assets in private banks.
- The right to issue CDs was extended to all banks and non-bank financial institutions (NBFIs).
- The burden of monetary control was lowered by a reduction in reserve requirements from 15 per cent to 2 per cent of deposits.

Efforts to promote competition were coupled with improvements in prudential supervision of banks. Regulations limiting lending to persons, firms or groups to 20 per cent and 50 per cent of equity were phased

in. The new capital requirements forced greater levels of equity for banks<sup>4</sup>. Insurance company soundness was improved by the imposition of solvency requirements.

Having dealt with banking, the next reform package (PAKDES, in December 1988), focused on stimulating the capital market and other financial institutions. The government issued new regulations covering the establishment of multi-finance companies empowered to engage in leasing, factoring, venture capital, credit-card operations and consumer credit. The same activities were made available to banks. Another set of regulations came out governing securities trading, including prohibitions against insider trading. A major limitation to the stock market was eliminated when domestic deposits were subjected to a 15 per cent withholding tax, the same tax levied on dividend payments. New regulations also opened the market to foreign investors.

PAKMAR, the March 1989 package, was aimed at refining the prudential regulations first announced in October 1988. It contained a series of decrees clarifying, among other matters, the development and control of NBFIs, lending limits, joint-venture bank capital ownership and bank mergers, the definition of bank capital, reserve requirements and bank investment in stocks. The long-standing absolute limit on external borrowing was replaced with restrictions on the net open position of banks in foreign exchange (25 per cent of equity). Furthermore, the requirement of prior BI approval of off-shore lending was eliminated. This allowed banks to borrow off-shore more freely so long as they lent domestically in foreign exchange or otherwise covered their position, thereby further freeing up the capital account.

PAKJAN, announced in January 1990, took on the directed credit programs that had continued to exercise a large though diminishing role in the banking system despite initial efforts to curtail them in 1983 (Table 3). This time priority programs were limited to four activities (mainly finance for small farmers and foodstuffs). One important sector excluded from directed credit was export finance. Interest rates were moved closer

---

<sup>4</sup> This equity cushion was quickly erased when lending expanded (to be discussed in the next section).

to the market level and the portion of credit available for refinancing was lessened. Mandatory, subsidized credit insurance was abolished. All these measures were additional incentives for originating banks to more carefully select and monitor their borrowers. As a political compromise, the elimination of directed credit programs for small businesses was replaced by a requirement that 20 per cent of a bank's loans be made to small borrowers.

PAKFEB, the latest set of reforms, and announced in March 1991, returned once again to prudential regulations. New professional standards were set for bank directors. Loan-loss provisioning standards were overhauled, now involving a financial analysis of customers rather than simply a check of whether their payments were current. A new, more quantitative evaluation of bank soundness, based on capital, asset quality, management, equity and liquidity, was implemented. Finally, banks were obliged to adopt the risk-based capital adequacy standards (as stated in the Basel Agreement) by the end of 1993 (subsequently extended to the end of 1994).

These important reforms were followed by several important new pieces of basic legislation covering banks, pension funds and insurance companies, all issued in February and March of 1992. Immediately beforehand, a regulation establishing the operating rules for closed-end mutual funds was also handed down. The Banking Law is particularly important since it eliminates any legal distinction between private and State banks or between NBFIs and commercial banks. The former must now choose between operating as a security house or a bank. New, stiffer penalties for fraud are included in the law, along with a provision for the partial privatization of State banks.

### 3. Summary of Reforms

Before moving to a discussion of the effects of financial reform, we will now briefly summarize the discussion so far. The pre-reform system was dominated by State-owned banks whose credit decisions and interest rates were largely controlled by the BI, itself a major commercial lender. As a result credit decisions were based on administrative decisions at BI with preference being given to public enterprises, protected domestic firms and

agriculture. Competition between State and private banks and between banks and other financial intermediaries was stymied by high entry barriers and the ceiling on credit expansion at all banks. Nonetheless, the open capital account put limits on Indonesia's ability to manipulate domestic interest rates by offering larger depositors and borrowers an off-shore option. The financing of fiscal deficits through foreign borrowing put a cap on expenditures that helped contain inflation and domestic demand.

The pressures of adjusting to external shocks, chiefly the oil-price declines of the 1980s, and concerns over the implications of pervasive controls of credit, led to the 1983 reforms which removed all credit controls and freed interest rates on all but directed credits. The latter were streamlined but continued to play an important role in the system until their reform in early 1990. The second stage of reforms, begun in 1988, tackled the high entry barriers to banking and attempted to foster competition between banks and other financial intermediaries. This was followed in 1991 by strengthening of prudential regulation, a process that had first begun with some reforms in 1989.

Despite this generally market-based reform, there are still some areas of finance where the market is not given full play. As mentioned above, the most important is the ruling requiring banks to lend 20 per cent of their portfolio to small customers. For foreign and joint-venture banks this rule has been replaced with a requirement that 50 per cent of all lending be to exporters. The reinstatement of quantitative limits on bank external borrowing in November 1991 also limits the openness of the capital account.

### III. EFFECTS OF THE FINANCIAL REFORMS

Having presented the macroeconomic background and the nature of the reform process, we now turn to an evaluation of its effect both on the financial system and the real economy.

#### 1. Effects on the Financial System

The McKinnon-Shaw framework highlights the importance of reform of the financial system in promoting financial savings and improving interme-

diation. We now review how the financial system has reacted in three key areas: (a) financial deepening and interest rates (b) transforming the maturity of savings to match the needs of investment projects, and (c) the efficiency of intermediation.

#### a) Financial Deepening and Interest Rates

Following reform, the financial system has deepened and broadened. Reform led to a rapid expansion of financial assets within the economy after credit and interest rates ceilings were eliminated in 1983 (Table 2). Overall financial asset growth in real terms more than doubled (to 13.2 per cent) between 1982 and 1988 compared to its rate between 1978 and 1982. Private foreign-exchange bank growth was the strongest in banking, surpassed only by leasing, which had a much smaller asset base. Private banks were particularly successful in attracting time deposits from private individuals and firms, despite a narrowing of their interest spread over State banks as the latter responded to their new freedom by boosting rates 6 to 8 percentage points (Table 4). This move narrowed the differential from 8.5 percentage points on 3-month time deposits in 1982 to 2.6 percentage points in 1983. The differential fell to less than 2 percentage points by 1985 and is currently closer to one percentage point. Initial gains in deposits at private banks were also made despite restrictions on the number and location of private bank offices. Insurance companies, public enterprises and government accounts all continued to be dominated by State banks, chiefly because of legal and regulatory restrictions. The freedom to set interest rates did allow State commercial banks to boost real growth to almost 12 per cent, after a real growth of less than 2 per cent earlier on. Interestingly, despite the initial attempts to curtail directed credits, BI's assets expanded at close to 11.8 per cent real per annum between 1982 and 1988, compared to only 1.4 per cent between 1978 and 1982. This growth did not slow down until 1988-1991.

After the lowering of entry barriers in 1988, growth expanded further, helped by a sharp increase in the number of firms. Assets at deposit money banks grew by nearly 20 per cent in real terms between 1988 and 1991, pushed by private foreign-exchange and non-foreign-exchange banks, whose asset growth was 41 per cent and 35 per cent, respectively. On

the deposit side of the balance sheet, private banks in only two years have increased their share of deposits to over 40 per cent, while that of State banks has fallen to below 50 per cent. Part of this increase is due to the success of private banks in attracting savings accounts. Nominal growth of savings accounts has exceeded 40 per cent since 1988.

Overall financial savings increased dramatically as a result of the 1983 and 1988 reform measures. M2 to GDP ratios increased sharply between 1982 and 1991, after an increase in the previous nine years of only 4 per cent (Table 6). The bulk of this improvement came because of an expansion of quasi-money -time and savings deposit- that went mostly to private banks after the interest rate deregulation of 1983 (for time deposits) and 1988 (for savings deposits). The link between this dramatic jump in financial savings and domestic savings relative to national accounts is explored below. In the meantime, however, it is important to note that an important, though unknown, amount of the increase in M2 to GDP was due to the movement of deposits out of Singapore and other off-shore markets and into Indonesia.

An interesting impact of the reforms is evident in the figures on M1 to GDP, where M1 is composed of currency, C, and demand deposits, DD (Table 8). As Chant and Pangestu (1992) have pointed out, the 1983 reforms had little effect on the M1/GDP ratio, with the ratio actually falling in 1983 and 1984. This pattern is consistent with M1 being held chiefly for transactions and therefore only marginally affected by the higher rates available on quasi-money. The 1983 increase in interest rates did lower demand for M1 relative to income somewhat, as people turned to the more remunerative quasi-money. After the 1988 reforms, which allowed greater branching and improved service, including interest on demand deposits, there has been a discrete jump in the M1/GDP ratio. The effect of higher interest rates on demand deposits is also visible in the stagnant share of currency to GDP and the increase in DD/GDP.

Looking at the allocation of credit across institutions shows a different pattern from that noted earlier for deposits. State banks actually expanded their share of total credits between 1982 and 1988 from 61.7 per cent to 65.1 per cent. The maintenance of State bank dominance in credit provision was due in large part to the continued importance of liquidity credits funneled principally through State banks (Table 3) and to the decli-

ne in direct lending by BI, whose share fell from 26 per cent in 1982 to only 4 per cent in 1988. Because of the withdrawal of BI from direct credit creation, private banks also expanded their share of credit, which surged from 9 per cent to 23 per cent.

Lower entry barriers created a stampede of new firms into financial services. In banking, more than 75 new banks were opened between 1988 and 1991 (Table 2). Not only new banks, but the number of branches surged as well, an increase of more than 1100 to 3700 between 1988 and 1991. The PAKDES reforms initially sparked the equity market, leading to the licensing of over 200 stock-brokerage firms. The market itself finally began providing equity finance to complement greater amounts of debt finance, though this slowed down in 1990 with the rise in domestic interest rates and institutional growing pains (see discussion below).

Table 6  
MONETARY AGGREGATES IN GDP, 1978-1991  
(%)

	Currency	Demand deposits	M1	Quasi money	M2
1978	5.1	5.1	10.3	5.4	15.7
1982	4.7	6.7	11.4	6.3	17.7
1983	4.3	5.5	9.7	9.1	18.9
1984	4.1	5.4	9.5	10.4	20.0
1985	4.6	5.8	10.4	13.5	23.9
1986	5.2	6.2	11.4	15.6	26.9
1987	4.6	5.5	10.2	17.0	27.1
1988	4.4	5.7	10.1	19.4	29.6
1989	4.4	7.6	12.0	23.1	35.1
1990	4.6	7.5	12.1	30.9	43.0
1991	4.1	7.5	11.6	32.1	43.6

Source: Bank of Indonesia.

Not only has overall asset growth been strong, but the number of products available to savers and borrowers has multiplied and service improved. Some of the fastest growth, for example, has occurred in leasing and other newer financial activities. In banking, the range of attractive savings current and time deposit accounts widened. Home mortgages and

consumer finance are now available from a number of providers. Domestic syndicated loans allow on-shore financing of large projects by smaller banks.

#### b) Maturity structure

Accompanying the rapid expansion of bank liabilities and assets was a lengthening of maturities (Table 7). On the liability side, this was because of a fall in the importance of demand as compared to time deposits. Time-deposit maturities shortened dramatically, but were still longer than those of demand deposits. For all banks, 24-month deposits shrank to only 10.5 per cent in 1988, as compared to 45.7 per cent in 1982. The deregulation of savings deposits has led to a dramatic increase in their share of liabilities that, combined with a shortening of the maturity structure of time deposits, has led to a shortening of the average deposit maturity in the last few years. Since 1983, credit maturities have slowly lengthened. This means that loan maturities are somewhat better matched to the profiles of investment projects. The lengthening of credit maturities has occurred only at private banks. State banks and development banks have shortened the maturity of their credits. The modest improvement in the maturity of credits has come at some cost to bank soundness. It implies that banks are more exposed to interest-rate risk due to a widening maturity mismatch. Some of this risk is hedged by the use of variable rate loans.

Table 7  
COMMERCIAL BANK MATURITY STRUCTURE  
(billions of rupiahs; end of period)

	1983	1986	1988	1990	1991	Maturity Weights months
Bank Credits						
< 3 months	1,829	1,991	2,354	3,495	3,957	1.5
3-6 months	1,787	3,443	5,392	5,057	5,726	4.5
6 months-1 year	4,438	11,237	18,866	43,753	49,539	9.0
1-3 years	1,604	2,092	3,731	8,778	9,938	24.0
> 3 years	3,944	8,974	14,825	29,904	33,859	60.0
unclassified	105	56	105	191	218	1.5
Total	13,707	27,793	45,273	91,178	103,237	



Table 7 (Cont.)

	1983	1986	1988	1990	1991	Maturity Weights months
Average Maturity (mths) (a)	23.8	25.5	26.0	26.3	26.6	
Bank Funds						
Demand Deposits	6,031	8,157	10,350	19,254	22,013	1.0
Savings Deposits	584	1,387	2,174	9,662	10,595	1.0
Total Rupiah Time						
Deposit	4,441	10,393	19,622	38,789	40,559	
< 3 months	934	1,280	3,895	11,899	11,802	1.5
3-6 months	605	1,448	4,133	5,886	9,160	2.0
6 months-1 year	843	1,767	2,719	5,958	8,358	9.0
1-3 years	1,948	5,898	8,350	13,910	9,523	15.0
unclassified	111	132	525	1,136	1,716	1.5
Total All Deposits (b)	11,056	19,937	32,146	67,705	73,167	
Average Maturity (mths) (a)	5.8	8.6	7.8	7.3	5.1	

(a) Calculated by weighting the share of each maturity in total credit (deposits) by the assumed maturity weight (the last column of the table).

(b) This total does not include FX time deposits.

Source: Bank of Indonesia and author's calculations.

### c) Bank Cost Efficiency, Allocative Efficiency & Risk

Tobin (1984) divides banking efficiency into three categories. The most straightforward is cost efficiency: Do banks intermediate funds at the lowest possible cost for a given level of risk? This entails looking at overhead costs and, more generally, at the spread between borrowing and lending. The second measure of efficiency, allocative efficiency, tries to incorporate whether borrowers receive credit at a price commensurate with their risk. Alternatively, it can be thought of as how successful the financial system is in equalizing the marginal return on investment across the economy. The measure of efficiency disregards the cost and risk of credit to focus on liquidity. Since banks will necessarily have some maturity mismatch on their balance sheet, prudent management requires keeping enough liquidity on hand to meet unexpected demands for cash. This last item can be seen as a way of verifying that cost efficiency has not been achieved

through increasing risk. In general one could extend the analysis to other sorts of risks (foreign-exchange, interest-rate, etc.). We will now examine these different measures of efficiency.

*i. Cost Efficiency*

Indonesian banks have become more cost efficient since 1983. Non-interest operating expenses (NIOE), chiefly wages, rents and office supplies, have fallen sharply as a share of average total assets (Table 8)<sup>5</sup>. For all banks in 1982 NIOE chewed up 4.26 per cent of average assets while accounting for an exorbitant 7.11 per cent in non-foreign exchange banks. Interestingly, State banks showed lower overhead costs than private banks, implying that, though overstaffed, State bank wage levels were quite low. By 1988 NIOE figures had fallen to 3.23 per cent overall, a decline of 24 per cent, with private banks successfully bringing their overheads in line with those of State banks. As the 1988 reforms took hold, NIOE initially fell further as competitive pressures began to build. By 1990, however, the costs of a rapidly expanding branch network and higher wage rates for skilled staff pushed up NIOE at all but the foreign banks<sup>6</sup>. With the slowdown in this network expansion, banks, faced with lower asset growth and higher loan losses (see below), have responded by once again reducing overhead, most noticeably at State banks.

*ii. Bank Margins and Profitability and Efficiency*

A key to sparking domestic financial intermediation is to lower the spread between borrowing and lending rates. For banks to be more efficient, though, the lowered spread should not be offset by higher risk, a point to which we return in the next section. There are two means of measuring spread (Chant and Pangestu 1992). The first is to look at spreads on an ex ante basis, that is, the difference between posted deposit and lending

<sup>5</sup> The figures in Table 8 are based on unaudited balance-sheet and income statements collected by the Bank of Indonesia.

<sup>6</sup> Note that foreign banks were still subject to limits on branches and had traditionally had higher wage bills because of more extensive use of expatriate staff.

rates. This spread includes banks expectations as to future losses, expectations that can go very wrong. Alternatively one can judge spreads *ex post* by looking at the actual results from a bank's financial statements. However, one should cautiously interpret the results in this case as well, since losses embedded in the portfolio may not yet be fully realized.

Table 8  
COST EFFICIENCY FOR BANKS  
(% of average total assets)

	1982	1988	1989	1990	1991
Non-Interest Operating Expense					
State Banks	4.14	3.33	3.58	3.87	1.84
Private FX Banks	6.89	3.63	3.35	3.59	3.44
Private Non-FX Banks	7.11	3.68	2.87	3.87	3.57
Foreign Banks	4.01	3.76	4.18	3.97	2.63
All Banks	4.26	3.33	3.10	3.82	2.50

Source: Bank of Indonesia and author's estimates.

As we have seen, the attractiveness of depositing in the domestic market improved with the increase in real interest rates (Table 4). Improved cost efficiency and lower reserve requirements (after 1988) should have also narrowed the spread. Table 9 provides information on *ex post* spreads derived from the unaudited balance sheet and income statements of Indonesian banks as supplied to BI. The presentation follows the OECD format first used for developing countries by Hanson and Rocha (1982). It begins with interest income and expense, the difference being the net interest margin. Adding income and expenses from fee-based business, including foreign exchange, and subtracting non-interest operating expenses gives the net operating margin. Inclusion of extraordinary income and expenses, which include provision expenses, gives the pre-tax return on assets. The return on equity shown in the table is net of tax.

Both interest income and interest expenses as a share of average assets increased after the 1983 reforms. This is not surprising since both measures reflect interest rates (the difference being that the figures in Table 9 use assets, rather than loans as their base). As would be expected, State banks show the sharpest rise in interest income, from 1.4 per cent in 1982 to 9.6 per cent in 1988. This sharp rise reflects not only freedom to deter-

Table 9  
**BANK COSTS AND MARGINS**  
 (% of average total assets)

	1982	1988	1989	1990	1991
<b>Interest Income</b>					
State Banks	1.42	9.57	10.48	11.25	13.57
Private FX Banks	1.59	15.82	14.32	16.48	20.59
Private Non-FX Banks	0.91	16.92	14.81	19.56	25.13
Foreign Banks	4.45	11.71	12.05	12.52	12.99
All Banks	1.60	11.17	11.60	13.18	16.03
<b>Interest Expense</b>					
State Banks	4.12	7.40	7.77	8.08	11.43
Private FX Banks	7.95	11.90	10.81	12.49	16.14
Private Non-FX Banks	9.74	12.64	11.49	15.03	20.09
Foreign Banks	9.15	7.57	7.97	6.95	7.83
All Banks	4.82	8.25	8.83	9.29	12.60
<b>Net Operating Margin</b>					
State Banks	2.55	2.45	2.63	2.84	1.31
Private FX Banks	4.00	2.89	2.37	2.26	2.24
Private Non-FX Banks	3.67	1.78	1.37	1.93	1.87
Foreign Banks	4.51	3.70	3.64	3.98	4.53
All Banks	2.99	2.64	2.57	2.91	1.98
<b>Pre-Tax Return on Assets</b>					
State Banks	2.40	1.40	1.55	1.78	0.31
Private FX Banks	3.60	1.93	1.68	1.39	1.24
Private Non-FX Banks	3.08	1.29	0.78	0.97	0.91
Foreign Banks	4.32	1.78	2.80	3.02	3.39
All Banks	2.81	1.68	1.67	1.99	0.97
<b>Return on Equity</b>					
State Banks	67.31	44.54	47.34	65.59	16.16
Private FX Banks	32.89	29.65	18.43	15.07	12.63
Private Non-FX Banks	18.34	15.51	7.02	5.97	5.37
Foreign Banks	119.90	48.77	18.59	17.33	25.26
All Banks	45.97	29.93	24.82	28.21	16.65

Source: Bank of Indonesia and author's calculations.

mine loan rates, but also the elimination of credit ceilings which allowed State and other banks to move more assets into loans. State bank interest expense, however, does not increase nearly as much as interest income -only 3.3 percentage points, as compared to 8.2 percentage points. This

increase is smaller than that of private foreign exchange banks which were the State banks' closest rivals. The lower increase may be due to the continued presence of public-enterprise deposits in State banks, as well as the continued access of State banks to refinancing from BI. Another part of the difference is explained by the implicit government guarantee that State banks enjoy.

Lower interest costs at State banks did not translate into lower interest margins at these banks because of low loan income, which between 1982 and 1988 reflected the continued importance of liquidity credits (Table 3). The 1983 reforms did, however, lead to sharply higher interest margins at all banks, going from 2 per cent to 4 per cent by 1988, somewhat exceeding the 3.5 per cent interest margins earned by US banks in 1988<sup>7</sup>. Such margins were *negative* at all banks in 1982, while the figure for private non-foreign exchange was -8.8 per cent! This is only an accounting ploy, however, since gross operating margins were all quite high in 1982, made possible because income was being recorded from fees, rather than from interest. It is a mystery as to why, without restrictions on interest rates, private and foreign banks would resort to this subterfuge.

Reductions in NIOE between 1982 and 1988 allowed net operating margins to fall less than gross margins for all types of banks. The opening of new private banks pushed down margins at these banks, especially in 1991 when they approached international levels. State bank net operating margins were steady, however, until 1991 when, in the wake of reductions in refinancing and the loss of public-enterprise deposits, interest expenses grew 2.5 percentage points. All domestic bank returns on assets also declined between 1988 and 1991, chiefly as a result of higher provision expenses. This was particularly true for state banks where the combination of higher interest and provision expenses reduced profits to only 0.1 per cent of assets. Meanwhile, foreign banks, helped by low deposit costs and high income from foreign exchange trading, have been able to hold pre-tax profits at levels two to three times those of domestic banks.

Overall, the examination of ex post margins shows a banking system that has significantly reduced its spread as measured by net operat-

<sup>7</sup> See Duca and McLaughlin (1990) for the US figures.

ing margin, chiefly through a reduction in fees and overhead that has outstripped increases in the interest margin. Pre-tax returns on assets are approaching levels seen in recent years in the US.

### *iii. Credit Allocation and Risk*

One of the central aims of financial deregulation was to improve the allocative efficiency of the banking system by eliminating ceilings on credit and interest rates while limiting directed credits. These moves were designed to allow resources to be directed to high-return sectors of the economy, at prices that reflected the risk inherent in those sectors. As we have seen, the reforms were associated with lower costs of intermediation and greater credit flows. But was the credit better allocated? To assess the effects of the reforms in this area we look first at the sectoral allocation of credit, and then at the results of a firm level study, following this with an analysis of changes in the riskiness of bank lending.

The overall allocation of credit was not greatly affected by the 1983 reforms (Table 5), though the pattern has roughly followed changes in GDP. In part this may have been due to the continued importance of liquidity credits within overall credit until very recently. Trade continued to receive about 30 per cent of all credit between 1982 and 1988. Manufacturing's share of credit rose to almost one-third at the expense of lending to mining. These changes mirrored movements in value added over the period, with the manufacturing share in GDP increasing and the mining share falling.

Since 1988 credit growth has accelerated most rapidly in services and "other" two areas that have not seen a corresponding increase in value added. This is due to expanding home mortgages, car loans and other consumer finance. Part of the increase in 1990 was in response to the government decree mandating that 20 per cent of a bank's portfolio be lent to small borrowers. Most consumer loans satisfy the government's criteria. Critics have charged that this consumer and property-development lending has spurred conspicuous consumption and unhealthy increases in land prices. Experiences in other countries would support the view that lending to consumers and for commercial real estate is riskier than lending to other sectors. Indeed, the 1990/91 tight money policy, instituted in part to slow overall credit growth, took the steam out of the property market and led

to difficulties for some banks, including the bankruptcy of a newly-formed bank with large real-estate loans, Bank Summa.

The bankruptcy and subsequent liquidation of Bank Summa, the tenth-largest private bank with over US\$1 billion in assets, demonstrates the problem not only of concentrating lending on real estate, but also of lending to related parties. A major portion of Bank Summa's loans were made to affiliated companies. The poor performance of these companies further weakened the bank. Indonesia, with all its major private banks controlled by conglomerates, is particularly exposed to the risks of related lending. For this reason adherence to prudential standards requiring that no more than 30 per cent of equity be lent to any one group is critical if financial soundness is to be achieved. The Bank Summa case does present a useful precedent in that the owners agreed to cover all losses due to lending to related companies, over and above the equity they held in the bank. The case also points out the need for further improvements in Indonesia's procedures for dealing with problem banks. Shortcomings in laws and regulations regarding bank liquidation have complicated the process of settling accounts.

#### *iv. Loan Pricing and Default Risk*

Looking at the sectoral allocation of credit gives only a partial picture of the allocative effects of banking reform. Increased lending to sectors that have low returns, as measured by high loan default rates, is not an efficient allocation of credit. Efficient allocation thus requires that banks be allowed to price their loans appropriately. However, until 1990, because of the predominance of liquidity credits with fixed interest rates and targeted markets, there was little need for adequate loan pricing nor little leeway to do so. Credit risks could be passed off to government insurance companies at subsidized premiums, further lessening the incentive for banks to adequately assess and price such loans. This was particularly true of State banks owing to the importance of liquidity credits in their portfolios. The scaling back of liquidity credits, coupled with the strong growth in non-liquidity-credit loans, however, has allowed banks greater freedom in pricing their loans and in choosing sectors and borrowers to lend to. One of the first reforms undertaken in 1983 eliminated restrictions on deposit interest rates.

Altering bank cost of funds and thereby bank profitability has had profound effects on banks loan pricing, as can be seen in Table 9. Both these changes should lead, a priori, to an improvement in banks' management of default risk. Offsetting this, though, is the pressure on banks to build market share by aggressively expanding their lending portfolios at the cost of underpricing loans. While this has happened at some banks, margins in general do not seem to support this conclusion. However the sheer speed of the growth in credit of some 50 per cent per annum between 1988 and 1991 must have led to a weakening of credit quality<sup>8</sup>.

Determining which effect has predominated as regards pricing and allocative efficiency is highly speculative. An answer requires a judgement about changes in the level of risk in bank portfolios and the adequacy of measures to cover that risk. One approach to this question is to look at how loan-loss reserves and provision expenses have behaved over recent years (Table 10). This approach, however, requires caution for several reasons. First, BI portfolio examinations have traditionally focused only on the status of interest payments and collateral in classifying loans and determining reserve adequacy. Hence, the level of reserves needs not reflect the underlying financial strength of borrowers. Commercial-bank criteria have generally been stricter in classifying their portfolios. However, accounting standards as to when to declare a loan non-performing and how much to provision were not tightened until 1991 with a two-year phase-in. The standard for the treatment of accrued income when a loan becomes non-performing was not implemented until early 1991. Prior to that, interest payments, for example, could be capitalized so that a loan would appear current although a borrower had made no payments and could conceivably be bankrupt<sup>9</sup>. Analysis is further complicated by the nature of a great part of bank lending. Firms generally receive lines of credit that are rolled over, the so-called "evergreen" loans. If the line is large enough, a company can easily keep current by simply drawing down the line to meet debt service. In a period like 1988-90, when aggregate credit growth exceeded the interest rate for the system on the whole, no one paid off any debt

---

<sup>8</sup> See CSIS, (1990).

<sup>9</sup> Of course, banks, wishing to prop up their balance sheet can still capitalize interest illegally.



but instead simply borrowed more. Furthermore, the fastest rise in credit came in 1989 and 1990 as the overall economy grew at over 7 per cent. Such strong growth can reduce company loan defaults until economic growth slows, making it appear that current levels of reserves are adequate, based on recent experience, but potentially inadequate in the future. Indeed, as growth slowed in 1991 and 1992 problem loans increased as a share of bank portfolios. Finally, tax laws limit loan-loss reserve deductibility to 3 per cent of loans for private banks and 6 per cent for State banks, limiting banks' interest in exceeding these levels. All of these factors combine to make drawing conclusions about default risk from loan-loss reserves tentative.

Table 10  
LOAN LOSS RESERVES AND PROVISIONS (%)

	1982	1988	1989	1990	1991
Loan Loss Reserve/ Total Loans					
State Banks	3.2	4.2	2.3	4.4	4.5
Private FX Banks	1.7	1.2	1.0	0.8	1.1
Private Non-FX Banks	0.7	0.7	0.5	0.6	0.9
Foreign Banks	0.6	2.0	1.6	1.4	1.9
All Banks	2.7	3.3	3.3	2.7	2.8
Provision Expense/ Total Loans					
State Banks	N.A.	1.2	0.6	1.3	0.9
Private FX Banks	N.A.	1.0	0.7	0.8	0.7
Private Non-FX Banks	N.A.	0.9	0.7	0.6	1.2
Foreign Banks	N.A.	1.1	0.7	0.6	0.8
All Banks	N.A.	1.1	1.0	1.0	0.8
Provision Expense/ Interest Margin (a)					
State Banks	N.A.	44.9	36.0	35.5	47.3
Private FX Banks	N.A.	20.7	16.3	18.1	14.9
Private Non-FX Banks	N.A.	17.1	16.7	13.4	27.2
Foreign Banks	N.A.	17.2	12.8	8.7	14.6
All Banks	N.A.	29.2	28.2	22.3	23.4

(a) The interest margin is defined as the difference between interest loans and interest expense on deposits.

Source: Bank of Indonesia and author's calculations.

With these caveats in mind, the figures in Table 10 show that loan-loss reserves at all banks rose as a share of loans between 1982 and 1988, fell in 1989, and since then have increased to levels higher than in 1982. Provision expenses at state banks measured as a share of the interest margin show a similar pattern since 1988. This fall and subsequent rise in loan loss reserves is just the opposite of the pattern of credit growth shown in Table 2. Taken at face value it implies that banks, particularly State banks, have experienced a deterioration in credit quality during the last two years. So long as external factors have not dramatically affected the conditions of borrowers between 1982 and now, this would imply that allocative efficiency has worsened, at least since 1990.

One striking feature of the figures on loan-loss reserves and provision expenses is the sharp difference between the levels at State and private banks. In 1991, State banks recorded almost four times the loan-loss reserves of private banks, and were placing almost half their (smaller) interest margin into those reserves. Part of this discrepancy reflects sounder portfolios at private banks whose portfolio decisions were more often guided by profitability. However, the level of reserves at private banks is barely over the minimum of 1 per cent set by the Bank of Indonesia. For this low level to be prudent, almost the entire private bank loan portfolio would need to be sound! The low level of reserves, then, must also reflect attempts by private banks to bolster profits by foregoing needed provision expenses. Unfortunately the data do not allow us to compare the size of these uncovered losses today versus the pre-reform period. One can simply note that reserves are marginally higher today than in 1982, when the economy was slowing down sharply, so that the problem may have diminished since 1982.

*v. Efficiency and Return on Investment at Firms*

Harris, et al. (1992) tackle the question of allocative efficiency from a different angle, focusing on whether the financial reforms led to a equalization of the marginal efficiency of investment across different firms. This measure of efficiency has shortcomings since it is an equilibrium concept, while changes in returns in different sectors due to changing technology, prices, etc. could alter returns unexpectedly. Using plant level data from a sample

of about 200 manufacturing firms they find that there was a more efficient allocation of credit between 1984 and 1988; small and large firms, which show the highest increases in the productivity of capital and a convergence to the absolute levels of medium-sized firms, increased their access to credit in the wake of the reforms. Unfortunately, the analysis by Harris, et al. does not include post-1988 data. Since this is the period when banks showed increasing loan-loss reserves, it will be important to engage in further analysis before forming a definitive opinion on the implications of the financial reform for allocative efficiency.

#### *vi. Risks from New Operations*

Besides managing credit or default risk, the opening up of other areas of financial intermediation to banks has added to the risks they face. Severe exchange-trading losses by at least one Indonesian bank and commercial real-estate losses at another demonstrate that opening up new areas to bank operations can lead to inexperienced staff exposing the bank to excessive risks. Coping with the risks and opportunities of the new environment is a major challenge for banks as well as for regulators<sup>10</sup>.

#### *vii. Liquidity Risk*

A more traditional component of risk to banks is the risk of becoming temporarily illiquid. Illiquid banks jeopardize the role of the banking system in providing the means of payment for transactions in the economy and the gains of a smoothly functioning payments mechanism. To lessen this risk, a key element of the reforms has been aimed at strengthening the interbank money market to provide individual banks with liquidity to meet temporary shortfalls. Much progress has been made with the average weekly volume of lending increasing eight-fold since 1986. Maturities have lengthened to as long as one month, though the bulk of lending is still overnight. Despite the deepening liquidity, though, rates in the interbank

---

<sup>10</sup> See section C for a fuller discussion of the need for improved risk management and supervision.

market remain volatile. With the tightening of monetary policy in mid-1990, rates have ranged between 7 per cent and 60 per cent p. a., as major suppliers of funds -the five State banks- have coped with the reduction in liquidity credits and public-enterprise deposits.

The reduction of required reserve requirements to 2 per cent from 15 per cent in October 1988 had important implications for the liquidity policies of commercial banks. At 2 per cent of deposits, required reserves were in some cases lower than prudential liquidity management would warrant. For this reason banks overall have held "excess" reserves since 1988, with the bulk of the excess accounted for by State banks. Despite the tight money policy implemented in May 1990 (see discussion in section C), banks have still maintained excess reserves, though a smaller percentage of current liabilities. The tighter monetary policy, however, has led some banks to access BI's discount windows to maintain needed liquidity when funds have become scarce in the interbank market.

Bank loan-to-deposit ratios also remained very high. Their level remained almost unchanged from 1982 to 1990 for most groups of banks. Such high levels make it difficult for banks to adjust to temporary illiquidity, in part because loans are not as marketable as other assets. Levels are particularly high for the state commercial banks, complicating risk management. For this reason BI in March 1991 explicitly incorporated liquidity as an element of its quantitative evaluation of soundness, prompting banks to improve their liquidity position.

Another way of looking at financial-system risks is to judge the market's view of subsequent reforms in the Indonesian financial system in terms of the spread between US dollar deposit interest rates held on-shore and those held off-shore. Since both assets are denominated in the same currency, any difference in the rates would reflect transactions costs and, more importantly, the market's perception of the riskiness of the Indonesian financial system<sup>11</sup>. This measure goes beyond simply judging allocation efficiency from looking at credit risk. It encompasses other risks such as inte-

---

<sup>11</sup> One might argue that foreign-exchange deposits are not sufficiently large in a domestic financial system for their price to be a good reflection of their true value. In Indonesia these deposits have made up 10-20 per cent of time deposits and 5-10 per cent of demand deposits since 1982.

rest-rate risk, maturity and liquidity risk, as well as the risk of managing new operations<sup>12</sup>. Figures for 1982-1988 (Table 4) show that the first stage of reforms lowered the spread, though the negative number in 1985 probably reflects transaction costs and a relatively thin market. The spread widened in 1986-1988 as the economy went through macroeconomic adjustment. In the aftermath of the 1988 reforms, however, the spread again fell. This decline was accompanied by large increases in capital inflow, chiefly external borrowing. Nonetheless from 1989 on, the figures show a steady rise in the difference between on-shore and off-shore dollar deposits. Thus, the market believes that risks have increased since 1989.

#### *viii. Summary of Banking Efficiency and Risk*

Summing up the evidence on efficiency and risk, the 1983 reforms have certainly lowered intermediation margins and fostered credit expansion, much of it going to profitable firms, including small firms that were previously rationed. Increased lending to consumers, higher provisioning and higher market perception of financial risk, however, point to a growing risk in the financial system since 1988 as both the number of banks and credit growth have surged.

Credit allocation is closely related to the quality and quantity of information available in the market and the options available to bankers should a borrower default. Weak accounting standards and a scarcity of practicing public accountants, lack of registration of collateral and strict banking secrecy laws all limit the quantity and quality of information available. Inadequate bankruptcy laws limit the ability of banks to act against delinquent debtors. Although steps have been taken to shore up these weaknesses, their existence makes it easier to understand why financial reforms would be less effective in improving the efficiency of credit allocation than in increasing the quantity.

A strong supervisory agency can help to ensure a sounder allocation of credit by limiting the actions of banks that engage in risky activities, knowingly or not. As we have noted, Indonesia moved to improve pru-

---

<sup>12</sup> The latter two issues are taken up below.

dential supervision as early as 1989. The most through-going reforms, however, were not announced until March 1991. Furthermore, improvements in personnel as well as the regulatory framework are critical for effective supervision. The knowledge needed by a bank examiner to effectively do the job is only acquired over the course of five to ten years. It therefore should not be surprising that in a era of rapid asset growth, with a great influx of new bankers, some poor credit decisions were made, thus increasing risk in the financial system.

## 2. Real Effects of Financial Reform

### a) Savings

Sparkling savings, particularly by the private sector, was one of the avowed goals of financial reform in Indonesia. In judging whether this goal was achieved we first look at data from the Indonesian flow of funds and then estimate a private consumption function for Indonesia, focusing on the effects of financial savings on domestic savings.

The Indonesian flow of funds, available from 1984-89, provides information on savings and investment from various sectors of the economy, including firms, households and the government (Table 11). The figures on domestic savings rates show an 8.5 per cent increase, from 26.4 per cent to 34.9 per cent of GDP, between 1984 and 1989<sup>13</sup>. This is casual evidence of a positive correlation between savings and financial reform. Closer examination of the figures shows that 7.7 per cent of the increase comes from private firms which doubled their savings rates. None of the other sectors show rates of increase anywhere near that size. Private firm savings, however, include the residual left from adjusting the other sectors savings rates to the aggregate level taken from the standard national accounts. This number is probably overestimated for three reasons: first, because the size of the change is not reflected in other sectors, particularly households; se-

<sup>13</sup> The figures on savings and investment used in this section rely on official estimates. Other estimates, prepared by the World Bank, show a similar pattern of savings and investment but at much lower shares in GDP (see Table 1 for the World Bank estimates).

cond, because the aggregate rate of investment, 37 per cent, is one of the highest in the world; and, third, because inventories make up nearly 10 per cent of the aggregate investment number.

Even if the aggregate domestic savings figures are correct, they only show a coincidence between financial reforms and increases in savings. To get a better understanding, we estimated a private consumption function that controls for other effects. Private consumption was chosen rather than private savings to reduce the impact of measurement errors on the estimation, while taking advantage of the accounting identity that links private disposable income, consumption and savings. Private, rather than gross domestic savings, was estimated because of the independence of public savings and financial reform<sup>14</sup>.

Table 11  
STRUCTURE OF SECTORAL GROSS SAVING, 1984-1989  
(% of GDP)

	1984	1985	1986	1987	1988	1989
Non-Financial	25.38	25.44	23.65	26.81	30.33	33.18
Government	5.84	5.64	5.38	4.30	4.55	6.20
Firms	9.87	9.98	8.23	11.85	14.61	16.14
Public	2.18	1.96	1.49	2.07	1.41	0.71
Private	7.69	8.02	6.74	9.78	13.2	15.43
Households	9.67	9.82	10.04	10.66	11.17	10.84
Financial	1.06	1.49	0.85	3.03	0.58	1.68
Banks (a)	0.89	0.95	0.53	2.30	0.20	1.24
Non-banks	0.17	0.54	0.32	0.73	0.38	0.44
Foreign	1.04	2.31	4.96	3.10	2.22	2.13
Total	27.48	29.24	29.46	32.94	33.13	3.99
Memo Item:						
GDP (billions of Rp.)	85,702	93,056	98,490	118,795	135,099	159,336

(a) Including the Central Bank.

Source: Central Bureau of Statistics, Flow of Funds 1984-1989, p. 39.

<sup>14</sup> One could argue that a substantial reform which increased demand for M1 would increase government seignorage and, *ceteris paribus*, increase public savings. As we have seen above, M1/GDP did increase after 1988. Nonetheless, treating expenditures or tax revenues as given is not realistic since they are both instruments of fiscal policy and therefore their movements will reflect both policy changes and exogenous factors.

Before presenting the results we will briefly highlight the choice of variables used in estimating private consumption by drawing on issues discussed in the literature<sup>15</sup>. All work on consumption focuses on some measure of income as the chief determinant. Early empirical studies used current income, later replaced by permanent income or wealth as theory began to look at consumption in an intertemporal setting. Under the life-cycle or permanent income approach, consumption was only increased in response to permanent changes in income, while transitory increases were saved. Current income continued to play a role, however, if liquidity constraints inhibited consumers from maintaining consumption levels consistent with their permanent income.

The role of real interest rates in private consumption is another contentious issue. In theory the sign of the impact is indeterminate *a priori* since it depends on which predominates: the substitution effect (consume less today to have more tomorrow when higher interest has increased your wealth), or the income effect (increase consumption today and tomorrow because the higher interest rate has increased your wealth). Schmidt-Hebbel and Webb (1992) note that changes in real interest rates can cause shifts between various assets -out of physical assets and into financial assets- which could affect measurement of private savings, because of difficulties in treating the purchase of consumer durables, for example, but without affecting the overall level of private savings (see discussion below). Empirical results differ as to the sign of the real interest rate, but the effect is usually quite small (Fry, 1988).

Ricardians include public savings as a determinant of private consumption, arguing that expectations of future taxes lead consumers to reduce spending one-for-one with public dissaving (Barro, 1974). Some studies have included inflation as an explanatory variable though its sign is indeterminate *a priori*. Inflation increases uncertainty about the value of future earnings and could potentially reduce savings because of the lower return, or increase them for precautionary motives. Foreign savings are also assumed to affect private savings, usually with the argument that access to foreign

---

<sup>15</sup> For reviews of savings in developing countries see Schmidt-Hebbel and Webb (1992), Deaton (1989) and Fry (1988).



savings reduces domestic savings since the former do not solely finance additional investment.

Finally and most importantly for this paper, the amount of financial wealth has been posited as a determinant of private savings. The argument is that greater levels of financial wealth imply fewer liquidity constraints on borrowers and therefore higher consumption levels. Note that this premise runs opposite to the usual argument that financial reform, by increasing interest rates, will increase savings.

Using the independent variables just discussed -permanent income, liquidity, foreign and public savings, the real interest rate and inflation- we estimated a private consumption function using annual data from 1970 through 1991. The data were taken from a database maintained by BI. All variables were logs of current values, except for the real interest rate and foreign savings, the latter appearing as a share of private disposable income. Permanent income was calculated as a three-year moving average of private disposable income (Schmidt-Hebbel and Webb, 1992). Public savings were taken from national accounts and exclude public enterprises. The real interest rate was calculated using the three-month average time deposit rate and actual consumer price inflation for the year in question.

The results of the least squares regression of private consumption on the five variables and a constant shown in Table 12 show an excellent fit and no sign of first-order autocorrelation. Since several variables were not stationary, an Engle-Granger test for unit roots in the estimated equation was done using the first difference of private consumption. As expected, the sign of logged private consumption was negative. However, due to a fairly small sample size the non-stationary hypothesis cannot be rejected. There is a large and significant correlation between private consumption and permanent income, with an elasticity of .93, very close to the theoretical life-cycle value of one. Government savings come in with a unexpectedly positive and significant sign. This could be the result of the high correlation between oil prices and government savings, meaning that higher savings did not result from increased taxes with their contractionary effect on private consumption, but rather from additional income from abroad. This conjecture is consistent with the negative, though insignificant, coefficient on the foreign saving rate. The real interest rate and inflation have negative and insignificant coefficients.

Table 12  
 DETERMINANTS OF PRIVATE CONSUMPTION, 1970-1991

Variable	Coefficient	STD. Error	T-Stat.	2-Tail Sign.
Constant	0.403	0.127	3.181	0.006
Permanent Income	0.935	0.026	36.641	0.000
Real Interest Rate	-0.001	0.002	-0.455	0.656
Inflation	-0.001	0.002	-0.840	0.414
Liquidity	-0.026	0.012	-2.103	0.053
Foreign Saving	-0.254	0.143	-1.782	0.095
Government Saving	0.031	0.015	2.137	0.049
R-squared	0.9998	Mean of dependent var		10.028
Adjusted R-squared	0.9998	S.D. of dependent var		1.243
S.E. of regression	0.017	Sum of squared resid		0.005
Durbin-Watson stat	2.003	F-statistic		17,758.000
Log likelihood	62.066	ADF t statistic		-3.830

Note: Coefficients estimated using OLS.

Source: Author's calculations with data from bi.

Rerunning the equation without the inflation and interest-rate variables further confirmed the above results. The permanent income coefficient increased to .95. Public savings were still positively correlated with consumption, though the significance level rose to 68 per cent and foreign savings remained negatively corrected with private consumption.

From the standpoint of financial reform, the most interesting finding is the negative effect of liquidity (M2) on private consumption, which implies that increases in financial savings increase domestic savings. Since the permanent income coefficient is close to one, the two results indicate that liquidity constraints on private consumption were not a significant factor. The question remains as to why financial savings and domestic savings would be positively correlated when real interest rates are not statistically significant. A possible explanation is that increases in financial savings are associated with shifts in domestic savings away from hoarding goods. If this is associated with higher measured domestic savings, because of statistical problems in the treatment of durable goods, a positive correlation will result. Properly specified domestic savings and financial savings will therefore not be positively correlated. Still, even if this is the explanation, if greater financial intermediation allows more efficient, cheaper investment, there will still be benefits to higher financial savings.

## b) Investment

Increasing the quantity and efficiency of investment was a primary aim of the Indonesian reform efforts. As we have just seen, the reforms are correlated with higher domestic savings, which in turn boosts investment. Harris, et al. (1992) present evidence that the marginal efficiency of investment improved between 1984-1988, though, as noted earlier, the measure they use -equalization of rates of return across sectors- has flaws. They go on to estimate an investment equation as a function of sales, cash flow and leverage. Cash flow has been included to capture the effects of liquidity constraints, while leverage has been included to test whether higher levels reduced credit access and depressed investment. Their results show a significant reduction in the importance of cash flow to small firms following the 1983 deregulation and a reduction in overall market segmentation. The discussion in section IV A. of efficiency of credit allocation and hence investment, however, means that these improvements did not necessarily persist into the second stage of financial reform when entry barriers were lowered, though the effect on the quantity of investment has clearly persisted.

Indonesian financial reform involved freeing interest rates and led, ex post, to high real rates. This could be construed as retarding investment. Such an argument would be dubious for two reasons. First, from a theoretical standpoint, firms base investment decisions on ex ante rates, not ex post ones. If expectations of inflation consistently outpaced actual inflation, ex post rates would overstate ex ante ones. There is evidence that this has been the case in Indonesia. Table 4 shows the spread between on-shore dollar and on-shore rupiah deposit rates. The spread has consistently overstated the actual depreciation of the rupiah (with exception of the two maxi-devaluations). With fairly open goods markets linking domestic and international prices and an explicit exchange rate policy rule of maintaining the real exchange rate (at least in the post-1986 period), this overestimation on devaluation can be linked to an overestimation of internal inflation. Second, from an empirical standpoint, the work of Harris, et al. (1992) shows that measured returns on capital in manufacturing far outstripped the 10-15 per cent ex post lending interest rates prevailing since financial reforms began. Given this fact, the increased access to credit that the fi-

nancial reforms stimulated were probably much more important in sparking investment than the somewhat higher measured price. It should be recalled that prior to the 1983 reforms credit was rationed so that for many firms, the price was effectively infinite.

### 3. Macroeconomic Conditions and Financial Reform

Most prescriptions for financial reform call for stable macroeconomic conditions on the eve of financial reform (e.g. Caprio and Atiyas, 1992). Preference is generally given to opening the financial system after the current account and before the capital account (Hanson, 1992), and the references cited therein). The Indonesian experience with financial reform shows that within limits neither a stable economy nor a closed capital account is necessary for successful financial reform. As was discussed in section II, Indonesia in 1983 was in the midst of a serious stabilization program to adjust to the effects of deteriorating external conditions. Inflation, though relatively low at just over 10 per cent, was accelerating. A yawning current account deficit of 7.4 per cent of GDP needed to be financed. The capital account had been open for over a decade, while a web of trade and investment regulations restricted the current account. Nonetheless, the freeing of interest rates and elimination of credit ceilings successfully boosted financial and domestic savings.

Rather than conducive external conditions, the Indonesia experience spotlights the need for macroeconomic management that recognizes and adjusts to the constraints imposed by the external environment and the government's own budget limitations. Adjustment to the external environment was the thrust of the 1982-83 stabilization program with its major devaluation and extensive fiscal adjustment. The fiscal balance moved from a deficit of 24 per cent of GDP in 1983 to a surplus of 1.4 per cent. Devaluation provided the real depreciation needed to reach external balance, while fiscal adjustment made the real depreciation stick. In these efforts, the open capital account and the government's commitment to avoid financing the fiscal deficit from domestic sources played a critical role in conditioning the response of the economy. Commitment to the open capital account with a quasi-fixed exchange rate meant that attempts to soften the external blow by loose monetary policy would lead to capital outflows

and a quick reversal of policy. Expansionary fiscal policies were limited by access to official external finance, itself difficult to attract without a credible adjustment program. As a result, in the presence of lower oil prices expansionary policies were severely restricted. By releasing interest rates in this environment, there was little risk of currency substitution. Weak domestic demand also meant that releasing credit ceilings was unlikely to lead to excessive increases in domestic credit.

The importance of macroeconomic management, the role of the capital account and the absence of domestic debt finance is further reinforced by Indonesia's experience with the second stage of its reforms in 1988. By that year Indonesia had already applied a second round of adjustments in view of the sharp decline of oil revenues in 1986. Trade and investment restrictions had been relaxed. The economy was poised for growth a much more propitious time for financial reform. Nonetheless, the 1988 reforms, though successful in spurring further improvements in cost efficiency, competition and growth in the financial sector, also led to a growing problem of poor credits. This was the result of a combination of circumstances that macroeconomic policy failed to adjust to initially. Unlike in 1983, trade reforms opened the door to new profit opportunities within the Indonesian economy, spurring a rise in investment demand. Banks moved aggressively to finance these investment plans, spurred by competition from new entrants. Thus a private sector imbalance between savings and investment developed against which the prohibition against domestic deficit finance did not protect. This rise in demand was initially validated by the government's attempts to lower interest rates through a combination of loose monetary policy and tightening in late 1989 and early 1990. Only when the open capital account led to a US\$1 billion loss in reserves in April 1990 did the government move to tighten monetary policy. This immediately dealt with the interest-rate problem, by raising rates to levels consistent with international parity. The private-sector savings-investment gap, however, was little affected by the adjustment in monetary policy. Only in 1991, when fiscal policy tightened, was internal balance restored. In the interim a significant amount of new credit had been extended by banks, credits that became more difficult to service in 1991 as interest rates remained high and activity slowed somewhat.

#### IV. CONCLUSIONS

This paper began by looking at the theoretical links between financial growth, savings and economic growth. Discussion focused on four important aspects of the financial system and growth:

- the depth and breadth of financial savings;
- the ability of the financial system to alter maturities to suit the needs of investors;
- the efficiency of the financial system, both in terms of cost and in allocation of credit;
- the ability of the financial system to deal with informational asymmetries and incentive problems.

To promote these aspects of the financial system prescriptions for financial reform have frequently called for reform during periods of macroeconomic stability and under the protection of a closed capital account. What do phased reforms in Indonesia -the removal of ceilings on interest rates and credit expansion, then the lowering of barriers to entry, followed closely by a reduction of the direct role of the central bank in favour of a stronger supervisory presence- show about this set of prescriptions/effects?

The reforms have led to a large and sustained increase in financial depth and breadth in the economy, with the M2 to GDP ratio rising from 18 per cent in 1982 to over 44 per cent in 1991. What is more, econometric work on private savings in Indonesia shows that this increase in financial savings has not hampered domestic saving independent of any effect from higher incomes, lower inflation or the real interest rate. The maturity of bank loans has also been extended over the period of the reforms, better meshing with the investment needs of the economy. Cost efficiency has improved with a reduction in overhead. Spreads between deposit and lending rates have come down at all banks and have moved closer to one another at different types of banks.

In the area of credit allocation and financial-system risk there is less certainty about the positive benefits of the reforms, particularly the lowering of entry barriers in 1988. Evidence from manufacturing firms shows improved access to credit and a movement toward equalization of returns on investment across firms. Data on loan losses, the broader allocation of credit outside of manufacturing and an empirical estimate of financial-system

risk all point to increasing risk since 1988. Given the difficulties in allocating credit because of information and incentive problems, it is not surprising that efficiency gains are more elusive. These information and incentive problems highlight the need for improvements in the legal accounting and prudential systems that support efficient financial systems.

Indonesia's reform efforts were generally successful despite several factors that differed from standard prescriptions. First, Indonesia's capital account was open at the time of reforms; second, reform began in a time of serious macroeconomic adjustment. Indonesia's experience highlights the need for macroeconomic management that recognizes the limitations imposed by the external budget constraint and that of the government rather than macroeconomic stability per se, and responds quickly to those constraints. Indeed the open capital account aided macroeconomic management by providing quick feed-back when domestic policies moved out of line and limiting the inflationary consequences of excessive demand stimulus. The absence of domestic finance for fiscal deficits removed an important source of pressure on domestic financial markets. Quick response to external imbalance, backed by strong fiscal adjustment, aided the successful reforms in 1983. Overly stimulatory monetary policy, and a private-sector savings-investment gap which was not sufficiently offset by fiscal policy, exacerbated the credit expansion of 1989-90. Furthermore, the slow response of fiscal policy put more of the burden of adjustment on monetary policy, keeping interest rates high and thereby prolonging the problem of non-performing loans within the banking system. Adroit macroeconomic management can thus promote successful financial reform even in periods of macroeconomic adjustment with a economy open to speculative capital flows.

## BIBLIOGRAPHY

- Ahmed, Sadiq and Basant K. Kapur (1990), *How Indonesia's Monetary Policy Affects Key Variables*, Policy, Research and External Affairs Papers, WPS 349, World Bank.
- Balino, Tomas J.T. and V. Sundararajan (1986). "Financial Reform in Indonesia" in H.S. Cheng, *Financial Policy and Reform in Pacific Basin Countries*, Singapore: Oxford University Press.
- Barro, Robert (1988), "Are Government Bonds Net Wealth?", *Journal of Political Economy*, Vol. 82.
- Bernanke, Ben S. and Mark Gertler (1986). *Agency Costs, Collateral and Business Fluctuations*, National Bureau of Economic Research Working Paper #2015, September.
- Caprio, Gerard (1992), *Policy Uncertainty, Information Asymmetries, and Financial Intermediation*, Country Economics Department, World Bank, Policy Research Working Paper, WPS 853.
- Caprio, Gerard and Izak Atiyas (1992), "Policy Issues in Reforming Finance: Lessons and Strategies," The Economic Development Institute (EDI) World Bank.
- Caprio, Gerard et al. (1990), "Research Proposal: The Impact of Financial Reform", Financial Policy and Systems Division, Country Economics Department, World Bank.
- Center for Strategic and International Studies (1990), *Survey of Recent Developments*, Jakarta: CSIS, September.
- Chant, John F. and Mari Pangestu (1992). "An Assessment of Financial Reform in Indonesia: 1983-1990," World Bank, Washington.
- (1988), "The Analysis of Efficiency of Indonesia Banking", mimeo.
- Cheng, Hang-Sheng (1986), *Financial Policy and Reform in Pacific Basin Countries*, Lexington, Lexington Books, Mass.
- Cole, David C. and Betty F. Slade (1990), "Financial Development in Indonesia," Economic and Development Institute, World Bank.
- de Juan, Aristóbulo (1987), "From Good Bankers to Bad Bankers: Ineffective Supervision and Management Deterioration as Major elements in Banking Crises," Country Economic Department, World Bank.
- Deaton, Angus (1989), "Saving in Developing Countries: Theory and Re-



- view", *Proceedings of the World Bank Annual Conference on Development Economics*, Washington, D.C.: World Bank.
- Duca, John V. and Mary M. McLaughlin (1990), "Developments Affecting the Profitability of Commercial Banks", *Federal Reserve Bulletin*, July.
- Edwards, Sebastian (1984), *The Order of Liberalization of the External Sector in Developing Countries*, Princeton Essays in International Finance, N<sup>o</sup> 156.
- Fama, Eugene (1985), "What's Different about Banks?," *Journal of Monetary Economics*, Vol. 15, January.
- Fry, Maxwell J. (1988), *Money, Interest and Banking*, The Johns Hopkins Press, Baltimore.
- Gelb, Alan H. (1989), *Financial Policies, Growth, and Efficiency*, Country Economics Development, World Bank Working Paper, WPS 202.
- Gertler, Mark and Andrew Rose (1991), *Finance, Growth and Public Policy*, World Bank Working Paper, WPS 814.
- Giovanini, Alberto (1983), "The Elasticity of Savings in Developing Countries: The Existing Evidence," *World Development*, Vol. 117, July.
- (1985), "Saving and the Real Interest Rate in LDCs", *Journal of Development Economics*, Vol. 18: 2-3.
- Hanson, James A. (1992), *Opening the Capital Account: A Survey of Issues and Results*, Policy Research Working Papers, WPS 901, World Bank, May.
- Hanson, James A. and Roberto Rocha (1986), *High Interest Rates, Spreads and the Costs of Intermediation*, World Bank, Industry and Finance Series, #18.
- Harris, John R., Fabio Schiantarelli and Miranda G. Siregar (1992). "The Effect of Financial Liberalization on Firm's Capital Structure and Investment Decisions: Evidence from a Panel of Indonesian Manufacturing Establishments, 1981-1988", Boston University.
- Haubrich, Joseph G. (1989), "Financial Intermediation Delegated Monitoring and Long-Term Relationships", *Journal of Banking and Finance*, Vol. 13.
- Hill, Hal (1990), "Indonesia's Industrial Transformation, Part 1", *Bulletin of Indonesian Economic Studies*, Vol. 26: 2.
- (1990), "Indonesia's Industrial Transformation, Part 2", *Bulletin of Indonesian Economic Studies*, Vol. 26: 2.

- Khan, Moshin and Roberto Zahler (1983), "The Macroeconomic Effects of Changes in Barriers to Trade and Capital Flows: A Simulation Analysis", *IMF Staff Papers*.
- King, Robert G., and Ross Levine (1992), *Financial Indicators and Growth in a Cross Section of Countries*, Country Economics Development, World Bank Working Paper, WPS 819.
- Krueger, Anne (1981), "Interactions Between Inflation and Trade-Regime Objectives in Stabilization Programs", in W. Cline and S. Weintraub, eds., *Economic Stabilization in Developing Countries*, Washington: Brookings.
- Little, Ian, Tibor Skitovsky and Maurice Scott (1970), *Industry and Trade in Some Developing Countries: A Comparative Study*, Oxford: Oxford University Press.
- Mayer, Colin (1980), *Myths of the West: Lessons from Developed Countries for Development Finance*, World Bank Working Paper, WPS 301.
- McKinnon, Ronald I (1973), *Money and Capital in Economic Development*, Washington, D.C.: Brookings Institution.
- (1982), "The Order of Economic Liberalization: Lessons from Chile and Argentina", in K. Brunner and A. Meltzer, eds., *Economic Policy in a World of Change*, Carnegie Rochester Conference Series, Amsterdam: North Holland.
- Michaely, Michael (1986), "The Timing and Sequencing for Trade Liberalization Policy", in A. Choksi and D. Papageorgiou, eds., *Economic Liberalization in Developing Countries*, 41-59, London: Basil Blackwell.
- Nasution, Anwar (1983), *Financial Institutions and Policies in Indonesia*, Singapore: Institute of Southeast Asian Studies.
- Neal, Craig R (1990), *Macro-Financial Indicators for One Hundred Seventeen Developing and Industrial Countries*, Policy, Research, and External Affairs, Development Economics, World Bank Working Paper, WPS58.
- Sachs, Jeffrey D. and Susan M. Collins (1989), *Developing Country Debt. Vol. 3: Country Studies - Indonesia, Philippines, Turkey*, Chicago, University of Chicago Press.
- Schmidt-Hebbel, Klaus and Stephen B. Webb. "Public Policy and Private Saving", in V. Corbo, S. Fischer and S. Webb, eds., *Adjustment Lending Revisited: Public Policies to Restore Growth*, Washington, D.C.: World Bank.

- Stiglitz, Joseph E. and Andrew Weiss (1981), "Credit Rationing in Markets with Imperfect Information," *American Economic Review* 71, June.
- Sundararajan, V. and Tomas J. T. Balino (1988), "Issues in Recent Banking Crises in Developing Countries," *IMF Working Paper*.
- Taylor, Lance (1983), *Structuralist Macroeconomics*, New York: Basic Books.
- Tobin, James (1984), "On the Efficiency of the Financial System," *Lloyds Bank Review*, Vol. 153, July.
- Woo, Wing Thye (1991), "Strengthening Economic Management in Indonesia," mimeo.
- Woo, Wing Thye and Anwar Nasution (1989), "Indonesia Economic Policies and their Relation to External Debt Management," in J. Sachs and S. Collins, eds., *Developing Country Debt*, Vol. 3, Chicago: University of Chicago Press.
- World Bank (1989), *World Development Report*, Oxford, Oxford University Press.
- Vittas, Dimitri (1991), *Measuring Commercial Bank Efficiency, Use and Misuse of Bank Operating Ratios*, Country Economics Department, World Bank Working Paper, WPS 806.



**PENSION SYSTEM REFORMS AND SAVINGS IN  
LATIN AMERICAN AND CARIBBEAN COUNTRIES  
WITH SPECIAL REFERENCE TO CHILE<sup>1</sup>**

Andras W. Uthoff<sup>2,3</sup>

---

<sup>1</sup> This paper is based on national case studies carried out under ECLAC/UNDP projects RLA/90/001 and RLA/192/003, "Financial Policies for Development". These case studies have been published by ECLAC in separate edited volumes (Uthoff and Szalachman, 1991 and 1993 (forthcoming), and Iglesias and Acuña, 1991).

<sup>2</sup> The author wishes to thank Gunther Held for his comments on an earlier draft of this paper. The author has also benefited from comments received at different ECLAC seminars.

<sup>3</sup> The views expressed in this study, which has been reproduced without formal editing by ECLAC, are those of its author and do not necessarily reflect the views of the organizations.



## CONTENTS

INTRODUCTION .....	205
I. CURRENT STATUS AND CHALLENGES OF PENSION SYSTEMS .....	206
II. POPULATION, EMPLOYMENT AND RETURNS TO PENSION SYSTEM FUNDS .....	215
III. DEVELOPMENT OF CAPITAL MARKETS AND RETURNS ON PENSION SYSTEM FUNDS .....	219
1. Public sector reforms .....	221
2. Banking regulation and supervision .....	222
3. Security and insurance market regulation and supervision .....	223
IV. THE CHILEAN EXPERIENCE WITH AN INDIVIDUAL CAPITALIZATION SCHEME .....	224
1. Main characteristics of the new system .....	224
2. Prudential regulation of pension fund investments .....	225
3. Pension system results and financial market developments .....	226
a) Pension system population coverage .....	227
b) Pension benefits, now and then .....	229
c) Pension Funds and Financial market developments .....	230
d) Pension Funds, savings and investment .....	234
4. Other problems pending .....	235
a) Challenges related to financial markets .....	236
b) Other challenges .....	236
V. CONCLUSIONS .....	237





## INTRODUCTION

Pension systems in Latin American and Caribbean countries have been developed since early this century on the basis of compulsory contributions by workers. The systems have alternative built-in mechanisms to transform these contributions into savings for old-age security and other contingency income benefits. Thus the performance of the system can be evaluated in terms of the implicit returns estimated from relationships between future benefits and current contributions. Such evaluations show that the systems are not providing significant returns to contributors<sup>4</sup>.

In addition, the systems also face operational problems and most governments are seriously assessing and considering feasible reform alternatives. This is due to the unsustainability of their current financial and actuarial deficits, especially in light of their effect on public-sector account balances, and hence on macroeconomic policy management. This last issue is becoming increasingly important in evaluating pension-system reform in the region.

---

<sup>4</sup> Uthoff and Szalachman 1991, *Sistemas de Pensiones en América Latina. Diagnóstico y alternativas de reforma*. Costa Rica, Ecuador, Uruguay, Venezuela. CEPAL, Proyecto Regional Políticas Financieras para el Desarrollo. Santiago de Chile. Uthoff and Szalachmann, 1993, *Sistemas de Pensiones en América Latina. Diagnóstico y alternativas de Reforma. Volumen 2. Bolivia, Brazil, Guatemala, México, Colombia*. CEPAL, Proyecto Regional Políticas Financieras para el Desarrollo. Santiago de Chile. Iglesias and Acuña, 1991. *Sistemas de Pensiones en América Latina. Chile: Experiencia con un Régimen de Capitalización 1981-1991*. CEPAL. Proyecto Políticas Financieras para el Desarrollo. Santiago de Chile.

Although most systems were created as mechanisms for accumulating savings to finance pension benefits, the systems have been merged with other components of social security and their funds used for **redistributive purposes** by financing the increase in both population and other social security contingencies coverage. Today, the alternative effects of the system design on savings and the development of capital markets are also being considered.

The objectives of this paper are four: to briefly describe ECLAC's findings from case studies on the evaluation and reform alternatives to pension systems in Latin America and the Caribbean (ECLAC<sup>5</sup>, 1992); to discuss factors that define the return on alternative pension systems financing schemes; to indicate institutional and market factors needed to improve pension system performance; and to assess, in light of the above, the last ten years of Chile's experience with a large-scale and unique system based on individual capitalization of contributions.

## I. CURRENT STATUS AND CHALLENGES OF PENSION SYSTEMS

Previous research by ECLAC indicates that it is not enough for financial policy to rely exclusively on the response of voluntary savings to market forces. The evidence shows that the response of personal savings to interest rates is poor, reflecting a strong correlation between the substitution effect (higher interest rates raises the cost of present versus future consumption) and the income effect (with higher interest rates the same amount of savings allows for greater purchasing power). In turn, private firms are net borrowers and thus higher interest rates negatively affect their savings. The studies undertaken conclude that there is a need to develop policy instruments to promote compulsory saving but within the context of regulated and supervised institutions. The role of institutional savings through pen-

---

<sup>5</sup> See ECLAC, 1992, "Pension Systems in Latin America: Diagnosis and Reform Alternatives". Case Studies in Latin America and the Caribbean. Conclusions and Recommendations. Santiago, 3-5 December 1990 and 22-23 August 1991. ECLAC, Santiago de Chile, September 1992.

sion schemes is of considerable importance here (Massad and Eyzaguirre, 1990)<sup>6</sup>.

Currently, alternative mechanisms involve the financing of pension schemes to overcome a short-sighted attitude among people towards their own voluntary saving for old-age security purposes. These alternative pension schemes have been developed within a continuous process and/or combinations of two extreme cases. One is the "pay-as-you-go" system, where an *intergenerational solidarity mechanism operates*, through which those persons now in the labour force are obliged to contribute to the financing of defined pension benefits for those presently retired and/or to the financing of reserve funds for future contingencies. The other is an "**individual capitalization**" system where an *intragenerational solidarity mechanism operates*, by which each person's compulsory contribution is saved and invested for future pension benefits in an individual account.

Alternative systems include the following: a mixture of a basic social pay-as-you-go scheme, complemented by voluntary private capitalization alternatives (e.g., Brazil); or a social pay-as-you-go scheme with capitalization of reserve funds (like most countries in the region). There are several implications of these multiple alternatives, such as the difficulties in enforcing social-security legislation; the variety of programme benefits being implemented; the need for periodical revision of contribution rates and their relation to defined benefits; the regulation of the pension system market and its enforcement; the need for regulating the portfolio investment of social pension systems reserve funds and their enforcement, and so forth.

Perhaps what best summarizes the challenges of pension systems is their need to provide relatively high returns on contributions when the latter are considered as savings for old-age security purposes. Table 1 illustrates this point. Based on a hypothetical exercise, the table reflects the amount of savings accumulated by a contributor to the system had he/she experienced a flat life-earnings profile equivalent to 100 pesos in real terms, contributing with 10 per cent of net earnings to the system every

---

<sup>6</sup> See Massad, C. y Eyzaguirre, N. (eds.) 1990, *Ahorro y formación de capital. Experiencias latinoamericanas*. Argentina, Brazil, Chile, El Salvador México. CEPAL/PNUD Proyecto Regional Conjunto "Políticas Financieras para el desarrollo". Grupo Editor Latinoamericano. CEPAL, Santiago, Chile.

month for the number of years given in each column (30, 35, 40 and 45), with contributions capitalized at the real rates of returns given in each row (-5, -3, 0, 3, 5).

The amount of savings obtained after this person retires (Part 1 of the Table), and its equivalent in pensionable years with a pension equal to constant real salary (100 pesos) (part 2 of the Table), indicates that unless real capitalization rates are set at around 5 per cent, the system will provide pension benefits far below the average real level of earnings (given the 10 per cent contribution rate). Thus, with low capitalization rates the system would need higher contribution rates to achieve the goal of pension benefits equal to the earnings of the last working years, and/or the extension of the working lifespan (increased retirement age). Quite to the contrary, higher capitalization rates would allow for better pension benefits and/or extension of life expectancy at the age of retirement (earlier retirement), and/or lower contribution rates.

Returns on systems based on capitalization schemes depend on the composition of the investment portfolio of the funds and capital-market performance. In turn, returns on simple pay-as-you-go schemes are set equal to the rate of change of real wages plus that of the number of contributors minus the rate of growth of life expectancy at the age of retirement. Systems combining both schemes have a return which results from a weighted average of the two above.

Table 1  
SIMULATION OF INDIVIDUAL PENSION BENEFITS:  
IMPORTANCE OF CAPITALIZATION IN DEALING  
WITH SHORT-SIGHTED ATTITUDES(\*)

1. Amount Accumulated at Age of Retirement according to  
Years of Service and Capitalization Rate

Rate	Years			
	30	35	40	45
0%	3,600	4,200	4,800	5,400
3%	5,842	7,434	9,284	11,432
5%	8,357	11,408	15,324	20,349
-5%	1,858	1,976	2,068	2,139
-3%	2,370	2,596	2,790	2,957

Table 1 (Cont.)

## 2. Number of Years in which Participant Can Receive a Pension Equal to 100 % of monthly Earnings according to Years of Service and Capitalization Rate

Rate	Years			
	30	35	40	45
0%	3	3.5	4.0	4.5
3%	5.3	6.9	8.8	11.3
5%	8.6	12.9	20.3	37.3
-5%	1.5	1.7	1.7	1.8
-3%	2.0	2.2	2.3	2.4

(\*) Calculations are for an individual earning 100 pesos a month in real terms throughout his complete working life and with 10 per cent contribution tax.

Despite the original design, pension systems have been merged with other social-security contingency systems (e.g., job-related accidents and professional sickness, non-job-related accidents and non-professional health and maternity care and leave for the working mother, maternity and health care for dependents, dependent allowances, national health systems or public health programmes). It has been very common practice, on the basis of arguments in favour of redistributing income by creating a social-security net, to use pension system reserve funds to expand the population and contingency coverage under social security. This practice has been mentioned as one of the main factors contributing to the financial and actuarial deficits of the pension system. Use of reserve funds to cover temporary fiscal deficits, which are not repaid by the State, and use of funds for social-security purposes other than defined pensions, have been justified on the grounds of improving equity and the result of joint management of all social security schemes (Uthoff and Szalachman, 1991 and 1993)<sup>7</sup>.

<sup>7</sup> See for details, Uthoff, Andras and Raquel Szalachman 1991 *Sistemas de Pensiones en América Latina. Diagnóstico y alternativas de reforma*. Costa Rica, Ecuador, Uruguay, Venezuela. CEPAL, Proyecto Regional Políticas Financieras para el Desarrollo. Santiago de Chile, and Uthoff Andras and Raquel Szalachman 1993 *Sistemas de Pensiones en América Latina. Diagnóstico y alternativas de reforma. Volumen 2. Bolivia, Brazil, Guatemala, México, Colombia*. CEPAL, Proyecto Regional Políticas Financieras para el Desarrollo. Santiago de Chile.

Once those systems started facing difficulties in providing reasonable pension benefits and in achieving financial and actuarial equilibria, the trend in Latin America has been to develop them into a compulsory, public-sector-managed, simple "pay-as-you-go system". This trend is not a definitive solution. Aside from the problems pointed out in the previous paragraph, a simple pay-as-you-go system is subject to additional sources of financial disequilibria: rapid changes in the demographic structure of the population covered by the system; effects of the economic cycle on the labour market, and therefore on potential contributors; evasion and corruption; poor returns on the investment portfolio; under-declaration of earnings while accumulating seniority in the system; and defined benefits which bear no relation to changes in contributions and returns on investment.

Table 2 summarizes the main objectives, problems and alternative adjustments to improve current pay-as-you-go systems operating in the region. It can be noted that no simple solution is at hand. These systems require quite sophisticated adjustments involving an overall reform not only of social-security schemes, but also on macroeconomic and financial management grounds.

Based on such an assessment, pension system reforms should also consider their implications vis-à-vis capital market developments and savings investment processes. The region needs to increase its investment rates from 16 to 22 per cent to grow at 5 per cent and improve the performance of regional economies in the world economy. Such investment rates should allow for technological improvements, to redistribute income through human capital investment opportunities, and to make development environmentally sustainable. In the absence of significant and permanent capital inflows from abroad, domestic savings both public and private should be increased. Institutional savings may promote these efforts by contributing both directly and indirectly to savings (CEPAL, 1990)<sup>8</sup>.

---

<sup>8</sup> See CEPAL, 1990 *Transformación productiva con equidad. La tarea prioritaria del desarrollo de América Latina y el Caribe en la década del noventa*. Naciones Unidas, Santiago de Chile.

Table 2  
**PROBLEMS AND POSSIBLE REFORMS IN PAY-AS-YOU-GO SYSTEM**

Objective	Particular problem	Proposal	Instruments
Productive employment	Shortage of productive employment.	Reorientation of economic policy towards generation of productive employment.	Investment in human resources, savings, factor productivity, expanding existing markets for domestic goods, technological development.
To improve collection of funds	Evasion and/or delays in payment of social security taxes, debt from the state as an employer, lack of contributions from independent workers.	To create incentives for punctual payment of social security contribution taxes, to create mechanisms to negotiate employer debt.	Creation of unique list of contributors and dependents; creation of individual accounts; inspection of payments and indexed instruments to charge real interest rates to debtors to the system; indexed government bonds; simplification of procedures.
Investment of reserve funds	Low returns on reserve fund investment portfolio; use of funds for other government executed programmes; lack of indexed instruments to cope with inflation.	Regulation and supervision of investment portfolio; development of capital markets; separation of government programme administration.	Creation of regulation and supervisory institution; risk classification commission; financial intermediation; periodic and public balances of social security accounts; separation of fiscal accounts by social security and other government programmes.
Solidarity and wider population coverage.	Systems cover only a small share of the labour force and its dependents; there are large population groups facing income restrictions.	Development of mixed systems with a basic minimum pension and supplements based on individual savings efforts; development of incentives to promote	Use of funds in individual accounts as collateral for access to personal credits; standardized minimum pension; self-financing of additional pension

Table 2 (Cont.)

Objective	Particular problem	Proposal	Instruments
To make pension benefits bear relation to contributions.	Individual pension benefits bear no relation to changes in life-time contributions; existence of non-eligible beneficiaries; indexation of pension benefits which bear no relation to indexation of financing sources of the system.	Relate pensions to minimums determined by law and complement them with additional benefits according to life-time additional voluntary contributions and their capitalization.	benefits; separation of pension programme accounts from the general budget.  Age at retirement and pension benefit set according to a balanced formula taking into account life expectancy at retirement and previous contributions; flexibilization of age at retirement on the basis of adjustment of pension to similar formula as above; implement a basic minimum pension and a self-financed supplement; development of life insurance schemes; development of indexed instruments to be used in the operation of the system; regulation and supervision of eligible dependents; elimination of privileges bearing no relation to contributions.
Improvement of system administration	Excessive administrative expenses and inefficiency	Administrative reform.	Rationalization; separation of programme administrations; legislation; computerization of system administration; training; human resources policy; normalization; role of private sector.



ECLAC findings based on case studies of pension system evaluation and reform alternatives show that some countries already have incorporated capitalization schemes in the design of their pension-system reforms or are studying the idea. These schemes may assume two forms: a compulsory private scheme administered by private corporations created separately from the public scheme, but regulated and supervised by the State, as is the current system in Chile (Iglesias and Acuña, 1991)<sup>9</sup>; or private pension schemes as a supplement to the public scheme. A mixture of these two alternatives seems to be the basis for recent reform project proposals in Colombia and Argentina (Ayala, 1992 and Schulthess, 1992)<sup>10</sup>. Several other countries have historically encouraged voluntary private saving schemes to supplement the public scheme (e.g., Brazil, Camargo, 1991)<sup>11</sup>.

The ECLAC findings, however, also recognize limitations arising from characteristics of the regional economies. Government authorities are faced with very strong political pressures as the result of a large share of families living below the poverty line and whose income is thus limited when it comes to financing their basic consumption needs. The fact that these segments work in the informal sector, where enforcement of social legislation is weak, is a major reason for their sparse social-security coverage. Under such circumstances government authorities have difficulties in accumulating reserve funds coming from contributions by the labour force and contributors to the system. They are under pressure to redistribute such funds among the poor and politically powerful groups eligible for social-security defined benefits.

<sup>9</sup> For details see Augusto Iglesias and Rodrigo Acuña, 1991. *Sistema de Pensiones en América Latina. Chile: Experiencia con un Régimen de Capitalización 1981-1991*. CEPAL. Proyecto Políticas Financieras para el Desarrollo. Santiago, Octubre 1991.

<sup>10</sup> For details see Ayala, Ulpiano 1992 *Un Sistema Pensional de Capitalización Individual para Colombia*. Documento para el Proyecto Regional CEPAL/PNUD "Políticas Financieras para el Desarrollo". CEPAL, Santiago, Chile Noviembre de 1992. And also Schulthess, Walter, 1992 "Sistema Nacional de Previsión Social de la Argentina y Propuesta de Reforma" Documento para el Seminario Regulación y Supervisión de la Banca" y "Reforma al Sistema de Pensiones y Ahorro Institucional" en América Latina. CEPAL, Santiago de Chile, Noviembre 1992.

<sup>11</sup> Camargo, J. M. 1991, *Pensión Funds in Brazil*. Paper prepared for the Seminar on "Pension Systems in Latin America: Diagnosis and Reform Alternatives" ECLAC Joint ECLAC/UNDP Regional Project" Financial Policies for Development. Santiago de Chile.

In order to avoid such problems, the question of ownership rights relative to the accumulated fund is critical in the design of a pension system. Reforms promoting the accumulation of a fund and avoidance of political pressures on its allocation also endeavour to replace the public intergenerational transfer of contributions (from those in the labour force to those who are retired) with some sort of life cycle private (common or individual) savings and investment account of contributions for pension benefit purposes. There is undoubtedly a trade-off between the objectives for which the pension system can be used. Public funds can be used discretionally by the State for redistributive purposes in the first case, whereas such goals must be pursued through the allocation of resources in the capital market and/or through a subsidiary role of the State in the second case.

Social security in Latin America in the context of economic adjustment and restructuring must be carefully studied. Future perspectives and trends need to be discussed within various contexts: (a) the redefinition of the role of principal actors - mainly the private sector in providing health care and pensions; (b) rethinking of ways to extend social protection in both population and contingency coverage; and (c) the appraisal of financing and cost efficiency alternatives (McGreevey, 1990, Mesa-Lago, 1991)<sup>12</sup>. Any such discussion must bear in mind that in Latin America the private sector has been traditionally isolated from these areas of public concern; in several countries there is still very low population and contingency coverage by current social security schemes, and the sparse capital markets are in their initial stages of development.

Because pension systems are an individual policy instrument, they cannot simultaneously contribute to the provision of reasonable pension benefits in relation to previous contributions, the redistribution of income by increasing population and social-security contingency coverage, and the improvement of domestic savings. The Latin American and Caribbean experience shows that the answer to this policy dilemma is to keep the pension

---

<sup>12</sup> For further details see, William Mc. Greevey. *Social Security in Latin America. Issues and Options for the World Bank* World Bank Discussion Papers 110. The World Bank, Washington D.C. November 1990 and Carmelo Mesa-Lago 1991. "Social Security and Economic Adjustment-Structuring in Latin America and the Caribbean. A Study for the International Labour Office. University of Pittsburgh, December 1991.

system financially and actuarially sound and separated from other government redistributive programmes. The conditions to achieve this goal are given in the next section.

## II. POPULATION, EMPLOYMENT AND RETURNS TO PENSION SYSTEM FUNDS

The simulation in Table 3 is based on demographic and national account statistics. It reports on the contribution rate in the hypothetical case of a pension system designed to pay those over 65 a universal pension benefit equal to per capita GDP. The given parameters are the population share of those over 65 and the formal wage sector earnings as a percentage of

Table 3  
EARNINGS PROFILES AND SIMULATIONS. SIMULATIONS OF CONDITIONS TO ACHIEVE UNIVERSAL PENSION EQUAL TO PER CAPITA GDP

	Parameters		Wage earnings % GDP (%)	Simulations	
	GDP per capita (approx. 1990) (US\$ of 1980)	Share of population 65+ (%)		Contrib. Rate (%)	Years needed to achieve similar pension
Latin America	1,872	4.7	-	-	-
Colombia	1,379	4.1	37.9 (88)	10.8	37
Chile	2,526	6.0	33.0 (85)	18.2	30
Panama	1,461	4.8	50.6 (89)	9.5	40
Uruguay	2,254	11.6	33.4 (88)	34.7	20
Brazil	2,020	4.7	34.8 (80)	13.5	34
Costa Rica	1,460	4.3	48.3 (89)	8.9	41
Ecuador	1,363	3.8	14.1 (89)	27.0	24
Mexico	2,280	3.9	25.9 (88)	15.1	33
Peru	896	3.8	24.4 (89)	15.6	31
Venezuela	2,736	3.7	33.5 (89)	11.0	37
Bolivia	601	3.2	24.1 (86)	13.3	32
Guatemala	797	3.2	28.4 (89)	11.3	37
Honduras	608	3.3	43.3 (89)	7.6	42
Paraguay	1,296	3.6	27.4 (89)	13.1	34

Source: Estimates by the author on basis of demographic and national account statistics.

GDP. By definition, the population share of those over 65 shown in column (2) corresponds to the percentage of GDP needed to achieve the defined pension benefit goal and is directly proportional to the ageing of the population. The maximum requirement is in the case of Uruguay where such a defined pension benefit goal would necessitate the allocation of a 11.6 per cent of GDP for such purposes. The lowest requirements correspond to those countries which are still well behind in their demographic transition (Bolivia, Guatemala, Honduras, Paraguay).

A common feature of Latin American and Caribbean pension systems is that their population coverage is limited to formal sector workers. Formal sector wage-earnings as a share of total GDP is given in column 3. Column 4 shows the hypothetical average contribution rate were the entire cost of providing the universal pension (equal to per capita GDP) to be financed by contributors from the formal-sector workers system. This contribution rate would range from a minimum of 7.6 per cent in Honduras (where those aged 65 and above are only a small fraction of the population and the wage-earning share of GDP is large), to a maximum of 34.7 per cent in Uruguay (where there is a high percentage of elderly and, according to Latin American standards, the wage-earning share of total GDP is at an intermediate level).

If the same pension were to be offered to individual workers in a capitalization scheme, with a yearly 5 per cent capitalization rate in real terms (estimated as that needed for reasonable pension benefits in Table 1) column 5 indicates the number of years an individual worker would have to contribute to the pension plan prior to the age of retirement, had he earned a wage equivalent to per capita GDP during that period. There is no doubt that the larger the contribution rate, the less convenient it is for an individual to participate in a pay-as-you-go system and the more convenient to participate in a capitalization scheme.

In spite of its simplicity and perhaps questionable assumptions, the above exercise calls our attention to the parameters that determine the returns derived from contributions to one scheme or another. In the pay-as-you-go system, the returns on a given contribution rate can be approximated by the sum of the rate of growth of contributors (those in the labour force, employed and contributing to the system -most likely the rate of growth of formal sector employment) plus the rate of growth of average net ear-

nings in real terms, less the rate of increase in life expectancy at the age of retirement (e.g., 65 for males and 60 for females)<sup>13</sup>. That is why actuarial studies of such systems often recommend, as some of the suggestions in Table 2 do, either increasing contribution rates, reducing pension benefits (both in terms of coverage and the level of the benefit), increasing the age at retirement, or a combination of all three.

These parameters are particularly relevant to Latin America and the Caribbean. Demographic transition varies both between and within countries according to the socio-economic level, affecting basic demographic parameters which in turn influence pension system performance. On the average, in 1950 the total population of the region (some 89 million) grew at a rate above that of the 15 to 64 age group (the potential labour force participants). Statistics showed 78 persons at passive ages (below 15 and above 65 years old) per 100 persons at active ages. These elderly (above 65) represented only 8 per cent of the total passive population, or one elderly person per 17 persons at active ages. From 1960 onwards, the total fertility rate in Latin America declined sharply and the trends in the above indicators changed dramatically. In 1990, the total population was estimated at 260 million, more than triple the 1950 figures. The dependency ratio fell to 69 persons at passive ages per 100 persons at active ages (after rising to a maximum of 87 in 1970). One out of eight passive persons is elderly and there are less than 13 persons at working ages per each person over 65 (CELADE, 1990)<sup>14</sup>.

These characteristics are far less important in terms of ageing than has been the case in Western Europe. In that region, those aged 60 and above currently represent 20 per cent of the total population and two-thirds of the total passive population (Chesnais, 1989)<sup>15</sup>. However, as a distinctive feature of Latin America, ageing is taking place together with relatively high population growth rates in all age groups: those in need of education,

<sup>13</sup> Larrain, Felipe and Gert Wagner 1982 *Previsión Social, Algunas Consideraciones*. Instituto de Economía, Universidad Católica de Chile, Documento de Trabajo N° 84.

<sup>14</sup> For further details, see CELADE, 1990 *América Latina. Proyecciones de Población*. Boletín Demográfico. Año XXII, N° 45, Santiago de Chile.

<sup>15</sup> See Chesnais, J. C. 1989 *L'inversion de la pyramide des ages en Europe: perspectives et problems*. "Congres International de la Population, N° 3. New Delhi.

those in need of jobs, and those in need of pension benefits. This brings us to the important issue of the allocation of investment resources for growth with equity and environmental sustainability. The investment in human capital throughout the different stages of a person's life becomes a crucial element which also strongly encourages political pressures on the allocation of pension system reserve funds.

Another important feature of the region is the extremely heterogeneous nature of the relationship between potential contributors and beneficiaries within each system. This is the result of a highly segmented labour market. The poorer segments do not participate in formal pension fund systems but instead are organized through intrafamilial solidarity schemes, operating via extended families in which those in the labour force contribute with their income to satisfy the needs of all the young and the aged and those of working age, although well below the standards of any reasonable poverty line. Elsewhere, workers employed in the modern sectors contribute to compulsory public pay-as-you-go schemes, whereby those in the labour force finance the pension benefits of the retired with the expectation that future generations will in turn pay for them. At present, some formal-sector workers have access to private capitalization schemes, in which each generation contributes savings and investment needed to supplement its pension benefits. The coexistence of all these formal and informal pension systems is the result of the structure of the labour market in Latin America. It is hard to believe that population coverage of formal systems will increase without radical changes in labour market structures and/or the creation of very particular and innovative incentives to join the formal compulsory institutional schemes. None of these events is likely to take place in the near future.

In fact, between 1950 and 1980 Latin America's share of modern or formal employment, to which an institution pension-fund scheme is more suitable, increased by only 5 percentage points (from 52 to 57 per cent) of the total labour force. The rest of the employed pertained to traditional agricultural activities (self-employed, peasants and non-remunerated family workers) or to informal non-agricultural activities and/or domestic service, where control of compliance with labour legislation and the collection of compulsory taxes for social security purposes is more difficult. This positive trend in formal/modern employment creation was halted during the

eighties as a consequence of the debt crisis and overall recession. Among non-agricultural activities, formal employment lost ground against informal employment and occasionally unemployment (PREALC, 1982 and 1990)<sup>16</sup>. Recent studies have shown that the low level of formal employment is a major barrier to improving social security population coverage in general, and that of pension systems in particular (CEPAL, 1985; ECLAC, 1989; Mesa Lago, 1990)<sup>17</sup>.

This brings us back to the relevant issue of understanding the complex interrelations between demographic, employment, financial and developmental variables. The core element is the provision of the necessary savings to invest for redistribution and growth through a combination of human and physical capital investment projects. Although investment in human and physical capital is an important mechanism for the redistribution of income, it can also contribute widely to perpetuating inequality. To the extent that an individual's access to capital markets determines his opportunity for human and physical capital investment and his chances for upward mobility as part of the work force, then capital-market segmentation will constitute a mechanism for the perpetuation of inequality.

### III. DEVELOPMENT OF CAPITAL MARKETS AND RETURNS ON PENSION SYSTEM FUNDS

Development of capital markets becomes an important issue in the discussion of alternative designs for pension systems. If the objective of providing good pension benefits is important, then financial markets must warrant returns sufficiently to make it profitable to have invested in them by the time the contributor is eligible for pension benefits. In accordance with earlier estimates, Table 4 shows that for both males and females with

<sup>16</sup> For further details on these trends see PREALC, 1982 *Mercado de Trabajo en cifras 1959-1980* PREALC-OIT Santiago de Chile, and also PREALC, 1990 *Empleo y equidad, el desafío de los 90* PREALC-OIT Santiago de Chile.

<sup>17</sup> See CEPAL, 1985. *El desafío de la seguridad social en América Latina* Estudios e informes de la CEPAL, Santiago de Chile. ECLAC, 1989 *The Elderly in Latin America: A strategic Sector for Social Policy in the 1990s* LC/R 833 December 1989, and Mesa-Lago 1990 *La seguridad social y el sector informal* Investigaciones sobre empleo 32. PREALC, Santiago.

similar age-earnings profiles, unless portfolio investment real returns exceed 5 per cent on the average during one's entire working life, neither men nor women will obtain pension benefits equal to their last year's real earnings in the work force.

Table 4  
ESTIMATED OLD-AGE PENSION BENEFITS:  
ALTERNATIVE HYPOTHESES  
(As percentage of net earnings from last 10 working years)

Initial net earnings	Real benefits (5%)		Real benefits (6%)	
	Male	Female	Male	Female
25,000	101.7	63.9	143.6	102.5
40,000	104.8	65.9	148.1	105.7
100,000	108.0	67.9	152.6	109.0
200,000	109.0	68.5	154.1	110.1
360,000	109.5	68.8	154.6	110.6

Based on the following assumptions:

- (1) Fixed commission of 250 real monetary units.
- (2) Net earnings grow 2% per annum until contributor is 50 years old, and stabilizes thereafter.
- (3) Working period starts at age 22.
- (4) Males retire at 65 and by then have a life expectancy of 16.
- (5) Females retire at 60 and by then have a life expectancy of 21.
- (6) Percentage is estimated over the average net earnings of the last 10 years.

For different initial net earnings brackets, Table 4 computes the pension benefit an individual worker starting his/her working life at the age of 22 would receive had his/her net life earnings profile increased by 2 per cent per annum in real terms up to age 50 and remained stable thereafter. The difference by gender is due to the earlier retirement of women (at age 60) as compared to men (at age 65). This means that the former contribute during a shorter period and need pension benefits for a longer period (due to their greater life expectancy at the age of retirement). This explains why the relation between the monthly pension benefit for women, compared to the average last ten years net earnings, is significantly below that for men. But the table also shows that fixed commissions implemented to bear the cost of administering individual accounts are regressive, in the sense that they lead to lower returns for those in the lower net earnings brackets.



Capitalization of contributions has three basic inputs for increasing an individual's pension fund every year: the contribution itself, the interest paid on that contribution during that year, and the returns on the portfolio in which the fund is invested. Under stable real rates of return on portfolio investment over a period of time, in the earlier stages the largest addition to the fund comes from contributions. From the very start, however, both the fund and the returns from its investment grow exponentially. After approximately 15 years at a 5 per cent rate of return on portfolio investment, these returns constitute a larger input to the individual workers' fund than do the contributions themselves. This is the advantage of a capitalization scheme in contrast to a pay-as-you-go system governed by reasonable parameters (positive growth rates in formal employment and in real wages, and slight increases in life expectancy at age of retirement). This also necessitates an awareness of the impact that pension funds may have on an expanding financial market.

If reasonable returns from portfolio investments in domestic capital markets are to be warranted, a twofold set of conditions must be met, one dealing with the macroeconomic and the other the financial environment.

In fact, and due to the interperiodical character of decisions involved in institutional savings and resource allocation for future growth, authorities should take care to obtain a policy mix intended to maintain low and controlled inflation rates, positive in real terms but moderate interest rates and a credible exchange rate policy. In Latin America such policy mixes should satisfy at least three conditions: (a) they should be aimed at strengthening a financially balanced public sector; (b) they should be aimed at reforming the banking system; and (c) they should be aimed at developing the capital and insurance markets.

### 1. Public sector reforms

Three changes have been pointed out as the most important in order to balance public-sector accounts: the financing of social-security system deficits, the autonomy and solvency of the Central Bank, and the elimination and reduction of all quasi-fiscal deficits in the financial system.

In relation to the topic of this paper, the first change is straightforward.

Mechanisms need to be created to finance past deficits while avoiding future ones. Transition to any alternative system different from the one in operation should consider its public finance costs. The most common way out has been by issuing government compensation bonds for those already participating in the old system and not yet retired, and drawing from general public tax revenues for financing those presently retired. The public sector must make provisions for these payments in their current budgetary exercises.

## 2. Banking regulation and supervision

A second set of conditions deals with reforms to the banking system (Held and Szalachmann, 1991 and 1992, ECLAC, 1992)<sup>18</sup>. These can be presented in two stages. First, macroeconomic adjustment needs to be complemented by intermediation through the financial system in order to allow an efficient allocation of resources. A precondition is the financial solvency of banks and firms. Otherwise, financial liberalization and international competition through gradual opening of the capital account may prove inimical to healthy development of the domestic financial sector. The steps taken to liberalize the capital market in order to achieve monetary autonomy, free capital flows and exchange rate management must start with a reasonably solvent domestic banking system.

Regulatory structures through which the State may establish bank and financial-institution "rules of the game" for deposits and loans is a second stage. These include prudential regulation, to control banking risks, financial insolvency and illiquidity; financial regulation, oriented towards interest and exchange rates, currency denomination, instrument maturity

---

<sup>18</sup> For further details on the regulation and supervision of banks and financial institutions, see Held and Szalachman 1991, *Regulación y Supervisión de la Banca. Experiencias de América Latina y el Caribe. Argentina, Costa Rica, Chile, República Dominicana*. CEPAL, PNUD. Proyecto Regional Políticas Financieras para el Desarrollo, Santiago de Chile; also Held and Szalachman, 1992, *Regulación y Supervisión de la Banca. Experiencias de América Latina y el Caribe. Volumen 2. Guatemala, México, Paraguay, Perú, Venezuela*. CEPAL, PNUD. Proyecto Regional Políticas Financieras para el Desarrollo, Santiago de Chile, and ECLAC, 1992, "Regulation and Supervision of Banks and Financial Institutions. Case Studies in Latin America and the Caribbean. Serie Financiamiento del Desarrollo N° 8. Santiago de Chile.

periods, and other conditions related to the price and value of both domestic and foreign assets and liabilities; and finally, organizational regulation, to seek bank and financial institutional operational efficiency through economies of scale, the integration of economic activities and the promotion of competition among financial institutions.

Supervision of banks and financial institutions entails verification of compliance with the prudential, financial and organizational rules and regulations which govern their activities as financial intermediaries. (See the chapter by Held in this volume.)

### 3. Security and insurance market regulation and supervision

Last but not least are the reforms needed to promote the development of securities and insurance markets. Competition in these markets also requires three regulations: regulations for entry into the particular market; prudential regulation for those operating in the market; and motivational regulation for expanding the financial market.

Entrants into these markets must demonstrate financial solvency by fulfilling legal and financial requirements as an intermediary, and provide information about all financial instruments and conditions that will keep the market transparent. This includes registration of instruments to be issued and intermediated in the stock market, with the commitment to provide public and periodical information on their financial status, and secondly, registration of intermediaries in the stock market that will accept regulatory norms and supervision of their activities by independent institutions in order to maintain a minimum level of professional conduct, thus warranting a competitive and equitable intermediation of securities.

Prudential regulation of these markets is mainly concerned with three factors: market entry conditions -minimum capital and property requirements; an investment insurance guarantee scheme; and portfolio quality control standards and risk limitations. Two separate institutional developments in this area are the Deposit or Custody of Securities and the Risk Classification Commission. The first keeps track of all deposits, liquidations and other transactions, in accounts which also perform multilateral electronic balancing. The classification of risks is a service provided by specialized agencies, in order to carry out ongoing evaluation of firms offering

instruments and to determine their financial capacity. The final objective is to allow the public to take informed investment decisions. These agencies must be registered and must follow very strict procedures and methods in performing their duties.

Motivational regulation refers to the incentives needed to expand the market in order to attract new businesses, intermediaries, and investors, along with the emission of new stocks and securities. The purpose is to improve the role of these markets in channeling savings into productive investments. These incentives can assist in providing non-bank financing, especially that which comes from institutional savings.

#### IV. THE CHILEAN EXPERIENCE WITH AN INDIVIDUAL CAPITALIZATION SCHEME

The reform in Chile has drawn a great deal of attention due to its radical transition from a pay-as-you-go public system to an individual capitalization scheme, and also due to its relative success during its first ten years. This experience has been described in ECLAC's case study (Iglesias and Acuña, 1991) and elsewhere (Arrau, 1992; and Montt 1992)<sup>19</sup>.

##### 1. Main characteristics of the new system

The system is based on mandatory contributions of 10 per cent of base salary paid by the employee to a personal retirement account. This fund continues to build until the age of 65, in the case of males, and 60 for females. Funds belong to the worker and there are no defined benefits. The latter will depend on past contributions and their corresponding ca-

<sup>19</sup> An exhaustive description of the reform is given by Iglesias, Augusto and R. Acuña. 1991 *Sistema de Pensiones en América Latina. Chile: Experiencia con un Régimen de Capitalización 1981-1991*. Proyecto Políticas Financieras para el Desarrollo, CEPAL/PNUD Santiago de Chile. Summary reviews of the reform are given by Arrau, Patricio. 1992 *El Nuevo Régimen previsional Chileno* Seminario Internacional de Reformas al Régimen Pensional, Bogotá, Colombia, Mayo 20-21 de 1992; and Montt, Diego, in *The Chilean Private Pension Fund System* Superintendencia de Administradoras de Fondos de Pensión-Chile presented at Workshop on "Emerging Markets, Current Issues", Bolsa de Comercio de Buenos Aires, 23, 24 November 1992.

pitalization. Management of these accounts for capitalization purposes is handled by private pension fund managers, thus being firms incorporated into the private pension fund system and which compete for the funds on the basis of quality of service and commissions. The latter are set at about 3.25 per cent of reported salary and covers account administration, overhead, marketing, a group insurance policy of approximately 1 per cent of that salary for invalidity and survivor's benefits, and profits, if any.

The Pension fund managers have but one duty: to manage pension funds. The State is responsible for regulating their firms and supervising their market. The State also sets conditions to guarantee adequate returns according to average market conditions and a minimum pension for those participants unable to accumulate sufficient funds.

The reform sets benefits depending on past contributions and capitalization returns. Employees withdraw the fund upon retirement and purchase a life-insurance policy that guarantees a minimum family retirement revenue. Any surplus above the present value of the legal minimum may be withdrawn from individual accounts under a specially-managed retirement program. In addition, the contribution to a group insurance policy provides for resources in the event of other contingencies related to pension benefits: invalidity, survivor's coverage, and severance allowances.

Separation of social security programmes is also warranted by the reform. Sickness, maternity, work injury, unemployment benefits and family allowances are carried under separate national security or social insurance schemes that are normally government-sponsored but with varying degrees of private-sector involvement.

## 2. Prudential regulation of pension fund investments

The system operates under very strict regulations which can be summarized as follows:

- 1.- Pension funds can only be invested in financial instruments authorized by law.
- 2.- Pension funds are subject to very strict regulations for portfolio diversification by financial instruments and by issuers.
- 3.- All financial instruments subject to investment by pension funds must be evaluated and approved by the national risk commission.

- 4.- The value of all pension-fund instruments is adjusted daily in accordance with prices established by the supervisory authority: (85 per cent of portfolios are valued at current stock exchange prices).
- 5.- The management of pension funds is subject to a minimum level beneath which profitability may not drop.
- 6.- Custody of pension fund investment securities: at least 90 per cent of financial instruments must be in custody at the Central Bank.

Table 5 indicates the limits of pension fund investments, according to different instruments. These limits are set by law, and pension fund managers must obey very strict norms for diversification of their portfolio according to both investment instruments and issuers. The selected instruments are evaluated by the Risk Classification Commission, and must be intermediated in well-established stock and secondary markets. The value of the fund is adjusted daily according to market prices reported by the Superintendency of pension fund managers, and periodical reports must be given to contributors. Eighty-five per cent of the portfolio is evaluated at current stockmarket prices, but the overall value of the fund also varies in relation to changes in the market interest rate when estimating its current present worth.

In order to eliminate solvency risks due to bad investment management, pension fund managers are subject to a requirement concerning minimum profitability. To bear relation with market conditions such minimum is set at a level equal to the lower bound between the average profitability of all PFMs less 2 percentage points and half the average profitability of all PFMs. In the event of a cease of activities PFMs must make use of their reserve fund and legal capital requirements.

### 3. Pension system results and financial market developments

The effects of the pension system reform will now be analyzed in terms of four important results: population coverage; level of pension benefits; financial market developments; and national savings and investment.

In general, these types of evaluations are very hard to perform, largely due to the difficulty in identifying the standard of comparison. If, as is often done, the results of the new systems are compared to those of the old system, this is said to be unfair since it is precisely due to its poor

results that the latter is being replaced. If, quite to the contrary, the system is assessed on absolute terms, then supporters claim unfairness because it ignores the starting conditions. On the whole, as will be made clear, no definite evaluations have been made, and further research is under way on these matters.

Table 5  
PRUDENTIAL REGULATION OF PENSION FUND INVESTMENTS:  
CHILEAN LIMITS SET BY LAW ACCORDING TO INSTRUMENTS

Instrument	Limits (% of Fund)
1. Government instruments (Treasury and Central Bank)	45
2. Mortgages	80
3. Long-term savings, other securities from approved financial institutions	50
Short-term (less than one year)	30
4. Public and private sector bonds	50
5. Shares from other pension funds	20
6. Corporate shares	
a. non-concentrated property	30
b. real state corporations	10
c. concentrated property	10
7. Shares of investment funds	10
8. Commerce	10
9. Financial instruments from abroad	10 (a)

(a) From October 1996 onwards

Source: Iglesias y Acuña 1991, op. cit.

#### a) Pension system population coverage

Social security population coverage in Latin America in general, and that of pension systems in particular, has historically been very low. As discussed earlier, this is due to the structure of labour markets, with large segments of the labour force outside the formal sectors of the economy where social security legislation is easily enforced. The Chilean case has often been quoted as relatively successful in terms of population coverage (Messa Lago, op cit.). With the reform, lower social security taxes and increases in net earnings were considered important incentives to induce independent workers to contribute voluntarily to the system. Nevertheless, workers in infor-

mal sectors who had not contributed to the old system were ineligible for the main incentive, that being a compensation bonus.

As given in Table 6, population coverage measured by share of the labour force shows that whereas affiliates have come to represent 86 per cent of the labour force, those actually contributing to the system have never increased above 55 per cent. The causes of this poor result should be eliminated in order for coverage to increase. As mentioned before, this responds to the labour market structure in Chile, still with a high share of independent informal workers, together with a large incidence of poverty (Uthoff and Pollack 1990)<sup>20</sup>. Other authors have also mentioned that the situation results from loss of jobs; lack of incentive for independent workers to contribute; delays in contributions by employers; people formerly in the labour force who are retired and do not qualify; and participants in the old system (estimated below 10 per cent of the labour force) (Arrau, *op. cit.*).

Table 6  
POPULATION COVERAGE UNDER THE NEW PENSION SYSTEM  
(as a percentage of total labour force)

	Affiliates	Contributors	In old system
1981	39.0	-	-
1982	39.3	24.8	-
1983	43.0	28.0	-
1984	49.6	29.3	-
1985	56.8	32.9	11.3
1986	60.7	35.0	10.4
1987	66.4	38.5	10.0
1988	69.9	38.9	9.3
1989	74.4	41.0	8.8
1990	79.1	41.5	8.5
1991	85.6	51.8	-

Source: Iglesias and Acuña 1990, *Chile: Experiencia con un Régimen de Capitalización 1981-1991*, ECLAC, Políticas Financieras para el Desarrollo, and updated with figures from *Boletín Estadístico de AFP*.

<sup>20</sup> Uthoff, Andras and Molly Pollack. 1989. Poverty and the *Labour Market: Greater Santiago, 1969-85* in Rodgers Gerry, ed. *Urban Poverty and the Labour Market. Access to Jobs and Incomes in Asian and Latin American Cities*. ILO, Geneva.



## b) Pension benefits, now and then

It has not been possible to make a definite and general comparison between the amount of pension benefits received in the old and new system. The problem lies in the difficulties in estimating the pension benefit after full maturity of the new system. Such an exercise involves an estimate of the expected active life-cycle income (which in turn requires assumptions concerning labour productivity increases according to human capital endowments to estimate longitudinal earning profiles). It also involves an estimate of returns during the capitalization period and standardization procedures with respect to age and life expectancy at retirement.

Table 7  
FINANCING AND CHARACTERISTICS OF PENSIONS

## 1. Financing for the following benefits

Old-age Pension Benefits	Disability and survivors pension benefits
A. Accumulated capital	A. Accumulated capital
1. (+) Contributions (compulsory and voluntary)	1. (+) Contributions (compulsory and voluntary)
2. (+) Investment returns	2. (+) Investment returns
3. (-) Commission on individual account	3. (-) Commission on individual account
B. Compensation bonus	B. Compensation bonus
C. Transfers from voluntary savings account (if worker so wishes)	C. Transfers from voluntary savings account (if worker so wishes)
D. Government contribution if required to achieve minimum pension	D. Additional contributions (funded with insurance)
	E. Government contribution if required to achieve minimum pension

## 2. Number of pension benefits paid up to 1990

	Old age	% Contributors	Disability	% Contributors	Survivors	% Contributors
1989	19,953	0.57	14,388	0.42	35,094	1.01
1990	29,666	0.79	15,777	0.42	41,618	1.11

## 3. Average pensions (Thousands of pesos at December 1990; US\$ 1 = \$ 300)

	Old age	Disability	Widowhood	Survivors		Average earnings
				Child	Other	
1989	37.4	65.2	28.5	9.2	15.8	81.2
1990	39.4	63.9	27.8	9.5	16.8	84.4

Part 1 of Table 7 shows that results from comparisons of pension benefits provided by the two systems are highly sensitive to the *transition period*. This, is due to the importance of the compensation bonus and the way it was calculated relative to the overall result of the new system pension benefit. In turn, such a comparison is also sensitive to the amount of subsidies that pension benefits in the old system received as compared to those in the new system. Finally, we must also bear in mind the behaviour of the capital market during the capitalization period and its replicability in the future.

Parts 2 and 3 of Table 7 show that the system is still too new to make valid comparisons. In part 2 of the table we can see that so far less than 2 per cent of contributors have received benefits from the fund so as provided by the system (old-age pension benefits, disability benefits or survivors benefits). In turn, the income level of benefits that are being provided at present are quite below the average net earnings reported by contributors to the systems (Part 3 of the table).

The best one can do is recall the results in Tables 1, 3 and 4, to a large extent attributing the success of the system to returns above 5 per cent on the pension-fund investment portfolio. The role of the government is to enforce prudential regulation to try to reach such a goal based on market conditions.

### c) Pension Funds and Financial market developments

Table 8 indicates the amount of the cumulated fund and its portfolio investment composition. Only after 1985 were pension fund managers authorized to invest in the stock market. But it was not until 4 years later, in 1989, that these firms decided to go about it professionally. Between 1989 and 1992, the market value of common stock in pension fund portfolios multiplied by 10, from US\$ 350 to US\$ 3.3 billion. A note of caution must be sounded before extrapolating this behaviour. Again it is hard to isolate the impact of the pension-fund purchasing power from that of at least three other phenomena that can also help to explain the same figures: first, during the same period, capital flows from abroad increased significantly and currency revalued in United States dollars by about 20 per cent; second, Chile has witnessed seven years of strong economic growth that started

in 1985, just when pension funds were authorized to invest in the stock market, and has averaged above 6 per cent per year; and third, since 1985 the real average price index of shares (i.e., after allowing for inflation) has recorded a 500 per cent increase, of which half occurred after 1989 (see Table 9).

An important conclusion with respect to the relationship between pension-fund developments and financial market behavior is their contributions to expanding the financial system. This is the result of a relatively young system, which, together with the exponential accumulation of investment income in the individual funds of those of contributing age, justifies a large share of resources to be intermediated in financial markets.

The last column in Table 8 contains one indicator of financial expansion in Chile. Pension funds as a percentage of GDP grew from less than one per cent in 1981 to above 38 in 1992. Projections show that this share will level out at above 100 per cent of GDP by the year 2020 and before the system has completely matured.

The portfolio investment composition in Table 8 also shows extensive diversification and changes as the result of very strict regulations which have subsequently been modified. Highly concentrated on bank deposits and bonds (62 per cent) in the earlier stages, it is now more heavily weighted toward Central Bank and Treasury bonds (37 per cent) and common stocks (28 per cent).

Despite conservative regulations to avoid risks to institutional investors, returns on these investments have averaged, during the first 12 years of existence of the system, well above real interest rates in the financial system for the same period (see Table 10). Nevertheless a note of caution is also needed here. When analysing the results for 1992, one must observe that returns in real terms have dropped to 4 per cent, which contrasts with the excellent performance of Chile's economy during that same year, considered to be the best in the last 30 years (CEPAL, 1992)<sup>21</sup>.

---

<sup>21</sup> CEPAL, 1992. *Panorama Económico de América Latina y el Caribe* Santiago de Chile.

Table 8  
PORTFOLIO COMPOSITION OF PENSION FUNDS IN % (CHILE)

Year	Central Bank and Treasury bonds	Bank deposits and bonds	Mortgage Securities	Firm bonds and debentures	Common stock	Funds millions US\$ equivalent	Funds % GDP
1981	28	62	9	1	0	219	0.9
1983	44	3	51	2	0	1,223	6.4
1985	43	23	36	2	0	2,228	10.9
1987	42	28	21	3	6	3,570	15.5
1988	35	30	21	6	8	4,370	16.5
1989	42	21	18	9	10	5,388	19.7
1990	44	17	16	11	11	7,136	26.5
1991	38	12	13	13	24	10,078	34.4
1992 (Jun)	37	10	13	12	28	11,922	38.1
Projection							
2000							49-54
2010							77-87
2020							88-109

Source: Iglesias y Acuña, 1991. op. cit., and updated with data from the Superintendency reports.

Table 9  
STOCK MARKET AND PENSION FUND PORTFOLIO

Year	Price index	Common Stock		Pension Funds
		Volume traded index	Market value (US\$ millions)	Common stock (US\$ millions)
1981	105	592	5,000	-
1983	70	369	2,783	-
1985	100	100	2,919	-
1987	313	908	6,852	223
1988	425	1,094	8,438	354
1989	581	1,372	11,375	545
1990	750	1,155	14,564	806
1991	1,682	2,651	27,706	2,406
1992 (Jun)	2,122	3,117	34,444	3,347

Source: Montt, Diego 1992. *The Chilean Private Pension Fund System*. Superintendencia de Administradoras de Fondos de Pensiones. Workshop on "Emerging Markets, Current Issues", Bolsa de Comercio de Buenos Aires, 23-24 November.

Table 10  
**PENSION FUNDS: CHILE**  
 Real Rate of Return on Fund Investments (%)

Year	Pension Fund (a) System	Financial system (b) Interest rates
1981	27.5	13.2
1983	21.2	7.8
1985	13.4	8.2
1987	5.4	4.3
1988	6.5	4.6
1989	6.9	6.8
1990	15.6	9.4
1992	4.0 (E) q	5.8 (E)
Averages		
1981-91	15.4	8.4
1987-92	11.2	6.4

(a) Average of Pension Funds

(b) Real rates of interest of 90-360 days deposits.

Source: Iglesias y Acuña, 1990. op. cit. and updates by the author.

In summary, there has been a joint and significant increase in the volume and value of stock-market operations and pension-fund stock investments. The 300 per cent increase in pension-fund holdings matches the pattern of transactions, volume and prices on the Santiago Stock Exchange. However, there is room for believing in significant repercussions in the real economy. For example, sixty per cent of all mortgage securities are financed from pension funds, the same as with firm bonds and debentures. Nevertheless, due to the fact that this period has been accompanied by high and stable GDP growth rates, together with important incentives for arbitrage of international interest rates causing large capital inflows and currency appreciation, we are unable to draw any direct causal effect between pension funds and stock-market developments. Further research is also needed here. Relative to financial expansion, pension funds represent 38 per cent of total GDP and are distributed among different instruments according to very strict regulations. It is worth mentioning that high returns from capital markets will benefit workers to the extent that during their working lifetime these returns exceed 5 to 6 per cent on the average in real terms. During the last 12 years, returns have exceeded 15 per cent.

This result, however, is not sustainable in the long run, as would seem from the fact that for 1992 real returns on such investments fell to four per cent.

#### d) Pension Funds, savings and investment

The effect on savings and investment is very hard to decipher. As expected from figures on labour earnings as a percentage of GDP (Table 2), and a contributory tax of 10 per cent, social-security savings increased to above 3 per cent of GDP during the last three years for which we have records. At the same time, total savings also increased to around 20 per cent of GDP (22 per cent is estimated for 1992). There is no clear relationship between these two trends. Given the significant increase in social-security savings, national savings would have increased were no other forms of savings to have changed during the same period. Strong economic growth during this period also interacted with the increase in savings and capital formation. There are no specific studies regarding these events.

Figures in Tables 11 and 12 show the most recent official estimates on savings. There is a twofold trend on the issue of the relationship between social-security and other forms of savings. The first is that, together with private social-security savings, other forms of private savings have also in-

Table 11  
SAVINGS AND INVESTMENT IN CHILE  
(% of GDP)

Year	Private Savings			Public savings (2)	National savings (3) = (1) + (2)	Foreign savings (4)	Total savings = investment (5) = (3) + (4)
	Pension savings	Other private savings	Total (1)				
1980	0	2.8	2.8	11.0	13.8	7.1	21.0
1981	0.9	-1.8	-0.8	8.6	7.8	14.3	22.0
1983	1.7	8.2	9.9	-4.5	5.4	5.7	11.0
1985	1.8	8.6	10.3	-0.8	9.5	7.8	17.3
1987	2.1	6.4	8.5	4.1	12.6	4.3	16.9
1988	2.7	6.0	8.7	7.6	16.3	0.8	17.0
1989	3.1	6.3	9.4	7.9	17.3	3.0	20.3
1990	3.3	8.5	11.8	5.5	17.3	3.0	20.2
1991	3.3	10.9	14.3	4.9	19.2	-0.3	18.8

Source: National accounts and Ministry of Finance

creased quite significantly. The second is that despite the unusually high public-sector savings figures for 1980-81, what really happened is that public-sector savings capacity was affected, reverting to its more traditional figures. This is due to large increases in social-security deficits resulting from the transition from one system to another. This deficit is estimated to have reached close to 5 per cent of GDP during 1989-91.

Table 12  
SOCIAL-SECURITY DEFICIT ASSOCIATED WITH REFORM  
(% GDP)

Year	Recognition Bonus	Operational Deficit	Total Deficit
1981	0.01	1.19	1.20
1983	0.17	3.53	3.70
1985	0.24	3.36	3.60
1987	0.38	3.42	3.80
1988	0.36	3.04	3.40
1989	0.53	4.17	4.70
1990	0.63	4.13	4.76
1991	0.71	4.08	4.79
		Projections	
1995	0.71	3.84	4.55
2000	0.95	3.18	4.13
2005	1.11	2.28	3.39
2010	0.94	1.47	2.41

Source: P. Arrau, *op. cit.*

In summary, specialists have reached no final conclusions concerning the effect of social-security savings over national savings. This is because such an effect can not be easily isolated from others resulting from changes in income distribution, economic policy management and the composition of savings. Further research is needed on this issue.

#### 4. Other problems pending

Aside from the above issues related to the financial market, there still are some challenges linked to its current structure and functioning. There are also problems of a different nature.

a) Challenges related to financial markets

In relation to financial markets, we can identify a twofold challenge. First, that of the vulnerability of an individual worker's pension benefits to financial market shocks immediately before retirement. "Positive" shocks can substantially increase personal pension-fund benefits whereas "negative" shocks can substantially reduce them. Steps should thus be taken in order to make funds less vulnerable to sudden shocks in financial markets. The idea of a stabilization fund to render average returns compatible with normal financial market conditions during a worker's lifetime should be given some thought.

The second challenge concerns the potential control over firms and economic activity that pension-fund management firms can achieve based on financial capital markets conditions and operations. As things now stand, although these firms are not owners of the fund, they can gain considerable economic power by placing some of their members on corporate boards of directors. New regulations must be developed to avoid control over firms and economic sectors by economic groups linked to these pension-fund management firms. Estimates show that out of 15 firms the 3 largest account for about 70 per cent of all contributors, and the 5 largest for about 85 per cent of all contributors. Thus concentration of pension-fund management firms in the market may very well be a potential source for control over the economy; further regulations must be created to avoid this situation. In addition, and with a positive outlook for capital-market developments, mechanisms should be created to have fund management improve the link between financial savings and capital formation, especially that which is needed to improve redistribution and growth.

b) Other challenges

Concerning challenges indirectly linked to the structure and functioning of financial markets there is one of great importance: the market conditions for pension-fund managers.

Market conditions for pension-fund management firms are also in need of further regulations to correct various factors affecting the system's cost efficiency and redistribution goal: concentration of contributors in the hands



of a small group of firms is common and responds to important economies of scale; marketing costs are very high as the result of product competition and of the high returns on commissions; there is very poor transparency and participants lack all the necessary information for rational decision-making with regard to market opportunities. Lastly, due to the existence of fixed commissions, the system operates regressively in the allocation of returns based on the net-earnings brackets of participants.

## V. CONCLUSIONS

Pension systems operate in an interrelated manner with other important sectors of the economy: the labour market, the public sector, the financial market, the securities and insurance markets, and so forth. Reforms must be sought via an integrated approach. Both new and old pension-system designs can be perfectly operational under ideal conditions. Regulation and supervision mechanisms must be developed to meet them. The later involve not only those needed for the structure and functioning of the pension system itself but also those concerning other sectors and markets with which the system interacts.

The Latin American and Caribbean experience shows that regardless of their original design, most systems have developed into pay-as-you-go schemes. This has been a consequence of inadequate returns on portfolio investment due to inflation and its concentration on government non-indexed paper. Pay-as-you-go systems are facing, or will face, actuarial imbalances as the result of demographic changes, poor performance of labour markets and bad administration in terms of both the provision of pensionable benefits (which bear no relation to the individual's contribution) and an excess of overhead expenditures. The non-credibility of current systems have further deteriorated their financial situation by causing contributors to avoid their obligations and beneficiaries to claim benefits unrelated to past contributions. The impact of pension-system deficits on public-sector finance and macroeconomic imbalances close a sort of vicious circle by creating a negative environment for adequate investment decisions.

Reforms are being sought with expectations of breaking such a vicious circle. The key is to develop capital markets where compulsory sa-

vings can contribute to three objectives: accumulating funds for better pension benefits, contributing to capital formation for sustainable growth, and eliminating capital market segmentation in the access to investment funds. Other redistributive goals must be sought through general taxes on other sources of income.

The most radical reform has been undertaken in Chile, where a pay-as-you-go system has been replaced by an individual capitalization scheme. The fundamental change is from public management of tax collecting for pensionable purposes to private pension-fund management by firms who compete for individual accounts. Another change is from a pay-as-you-go scheme, where the rate of return depends on employment and real-wage growth and the rate of change in life expectancy at age of retirement, to a capitalization scheme, where the rate of return depends on the portfolio investment composition of the fund and the financial market results during the working lifetime as well as on the life expectancy at age of retirement.

The effect on savings of such a reform is not easy to discern. On the one hand, the transition implies sizeable obligations from the public sector with respect to those already retired within the old system (operational deficit) as well as those active and transferred to the new system (recognition bonus). Estimates of such a burden show that it will increase to as much as 4.8 per cent of GDP by 1991 and then gradually decrease to figures of 2.4 per cent of GDP by the year 2010. This undoubtedly affects public-sector savings capacity. With regard to the private sector, little research has been done with respect to the switch from compulsory institutional savings to other voluntary forms of savings. Social-security savings have increased up to 3.3 per cent of GDP from 1980 to 1991, but other forms of savings have also increased considerably in that same period. The definite causal relationship between changes in saving rates and all events (e.g., changes in the redistribution of income, balance of payments deregulation, financial liberalization, labour market reforms) occurring simultaneously with pension-system reforms makes it impossible to draw a definite conclusion.

Definite conclusions, however, can be drawn with respect to financial expansion. The fact that the new system is based on accumulation (capitalization) of pensionable funds, together with the relatively young age of

participants, explains the rapid growth of the total fund to be intermediated in the financial sector as a share of GDP. This share increased from zero to 34 per cent in 12 years and is expected to exceed 100 per cent by the year 2020. The speed at which the financial market expands as a consequence of pension-funds accumulation, and the responsibility of the State to justify rates of return that will bring about significant improvements in pension benefits (for which purpose real rates of return should be above 5 per cent) puts a lot of pressure on financial market performance. Macroeconomic stability, together with regulation and supervision of both pension-fund management and the financial markets, become important components of such reform. But they should be limited in order to allow markets to play their proper role in allocating resources efficiently.

Despite some impressive advances, other challenges still remain unsolved: the vulnerability of an individual worker's pension benefits to financial fluctuations at the time of retirement; the risks that economic power will become concentrated in the hands of one or two pension-fund Management firms; and the difficulties of increasing population coverage by system despite large and important individual incentives. Finally, there is the industrial organization of the pension fund managers' market in order to reduce its concentration on two or three firms, reduce marketing costs, improve the transparency of its operations, and avoid fixed commissions so as to improve the distribution of returns among participants at different income levels.



**BANK REGULATION, LIBERALIZATION AND  
FINANCIAL INSTABILITY IN LATIN AMERICAN  
AND CARIBBEAN COUNTRIES\***

Günther Held Y.\*\*

---

\* This paper draws heavily on country case studies undertaken for the joint ECLAC/UNDP regional project on Financial Policies for Development.

\*\* I would like to thank Luis F. Jiménez for his very helpful comments. However, responsibility for this paper rests solely with the author.



## CONTENTS

INTRODUCTION .....	245
I. BANK REGULATION AND SUPERVISION .....	247
1. Financial regulation .....	247
2. Organizational regulation .....	249
3. Prudential regulation .....	250
a) State guarantee on deposits .....	251
b) Deposit insurance .....	252
c) Norms controlling solvency .....	253
4. Bank supervision .....	255
5. Arrangements for the regulation of bank solvency .....	256
a) Free or non regulated banking (as regards solvency) .....	257
b) Public sector controlled banking .....	257
c) Bicontrolled banking .....	257
d) Uncontrolled banking .....	258
II. BANK REGULATION IN THE CHILEAN FINANCIAL LIBERALIZATION EXPERIENCE .....	259
1. Measures and financial consequences of bank reform .....	260
a) Unfavorable macroeconomic conditions .....	263
b) Prudential regulation failures .....	265
c) Loan-portfolio growth and financial crises as an outcome of "uncontrolled" banking .....	267
2. The bank reform of 1986 .....	268
a) Transparency vis-a-vis credit risk and effective capital .....	268
b) Assumptions regarding financial stability and self-regulating solvency measures .....	270
c) Control of deposit interest rates .....	271
3. Bank reform, bank performance and financial liberalization .....	271
III. OVERVIEW OF RECENT FINANCIAL INSTABILITIES IN LATIN AMERICAN AND CARIBBEAN COUNTRIES .....	273
1. Sample of countries exhibiting financial instability .....	273
2. Defective bank regulation and supervision as a factor of financial instability .....	284
IV. CONCLUSIONS .....	286
ANNEX .....	289





## INTRODUCTION

Since the mid-1970s financial liberalization has been part of structural reform in Latin American and Caribbean countries. Liberalization of bank credit and of interest rates and related measures on funding and on the structure of the banking system have characterized policy measures. Only recently have security markets and stock exchanges in some of the more developed countries of the region become important to financial development.

Solvency and efficiency are closely interrelated criteria of bank performance. A solvent bank is able to pay its deposits and other liabilities without drawing on its capital or own funds<sup>1</sup>. Bank efficiency can be appraised at two levels: operational efficiency in carrying out financial and services transactions at minimum cost, that is, at a minimum "spread" between lending and deposit rates of interest; and allocational efficiency when making loans and granting credit to socially profitable projects. Allocational efficiency includes operational or cost efficiency as well as the capacity of banks to attract deposits and make loans at competitive interest rates<sup>2</sup>.

This paper seeks to highlight the factors which determined the outcome of financial liberalization experiences in Latin American and Caribbean

---

<sup>1</sup> Solvency is taken up when dealing with prudential regulation.

<sup>2</sup> A bank which is perceived as solvent by depositors can attract funds and lend at lower interest rates than otherwise, while attracting high-quality borrowers; a cost-efficient or low-spread bank is also able to lend at lower interest rates than otherwise and attract low-risk borrowers.

countries in the 1970s and 1980s. Emphasis is given to country cases where these experiences led to solvency problems or severe financial crises.

The performance of banks as regards solvency and efficiency depends mainly on the following:

- a) Macroeconomic factors and policies determining output variability growth and relative price changes. These factors affect the level and variability of profit and income, i.e., the "first" loan repayment sources of firms and households; they thus also affect risks of loss in bank loan and asset portfolios.
- b) Regulations and norms which set the "rules of the game" of banking and the supervision of their compliance.
- c) Internal bank management of loans, credit and financial investments in terms of "safe and sound" portfolio practices.

Macroeconomic conditions and policies can have a major effect on bank solvency and efficiency. Here, only a brief outline of such conditions and policies will be provided as part of the environment in which financial liberalization experiences took place. Bank management also ranks high in determining bank performance. However, it will not be taken up except for noting that loan, credit and financial-investment practices depend significantly on bank regulation and supervision.

The main issues of this paper refer to bank regulation and supervision and their relations to liberalization and financial instability. The paper consists of three sections. The first provides an account of the different types of regulations which shape the framework of banking activities. It deals with financial liberalization, prudential regulation and alternative arrangements for controlling bank solvency. The second section looks at the financial liberalization of the Chilean banking system. This experience is of particular interest since it has gone full circle -from swift liberalization in the 1970s, to a heavy financial crisis at the beginning of the 1980s, a far-reaching bank reform in the mid-1980s, and since then, to renewed financial liberalization and proposed additional reforms to the banking structure. The third section contains an overview of a large sample of financial liberalization experiences in Latin American and Caribbean countries during the 1970s and 1980s which resulted in solvency problems and financial instability. This section seeks to highlight common factors behind this outcome. The paper ends with a summary of conclusions.

## I. BANK REGULATION AND SUPERVISION

Banking activities are usually subject to considerable regulations or norms governing authorized financial transactions and services, financial flows and stocks, the legal and accounting framework of banks, and other aspects. Based on Marshall, three types of regulations will be distinguished: financial, organizational, and prudential<sup>3</sup>.

### 1. Financial regulation

Norms seeking to control the flow and intermediation of funds are mainly geared to price stability and efficient allocation of resources. The Central Bank (or other financial regulator) may set norms on interest rates and the exchange rate, taking into account macroeconomic conditions and the competitiveness of domestic financial instruments (the latter should be able to attract and keep funds denominated in domestic currency). It may also regulate bank reserve requirements and foreign-capital flows to control the growth of the supply of money, the channelling of credit in certain directions (deemed socially profitable), and other aspects related to the pricing and availability of financial resources.

Financial regulations may set interest rates and/or the exchange rate too low, or below equilibrium levels. They may impose heavy reserve requirements, low-yield public-sector financial investments and other "quasi-fiscal" burdens on banks, and put other restrictions on raising and allocating funds, all of which reduce the real rate of growth and the real size of funds in relation to GDP or other non-financial magnitudes. According to the financial liberalization approach, in this case, regulations cause financial "repression" and lead to a backward or "shallow" financial system, represented typically by a few oligopolistic banks and a fragmented financial system. Furthermore, in real terms, regulations on interest rates and exchange rates would discourage savings and hence capital formation, exports and the production of tradeables<sup>4</sup>.

<sup>3</sup> E. Marshall, "El Banco Central como Regulador y Supervisor del Sistema Financiero", Reunión de Gobernadores de Bancos Centrales, Santiago, October 1991.

<sup>4</sup> E. Shaw, *Financial Deepening in Economic Development*, (Oxford University Press, 1973).

The financial liberalization approach interprets financial repression as typical of inflationary economies with weak public finances and heavy government "interventionism". On the basis of a sufficiently stabilized economy and strengthened public finances<sup>5</sup>, this approach advocates a policy of financial deregulation or liberalization of interest rates and exchange rates, as well as the abolition of directed credit allocation and other norms hampering market forces (as part of a wider shift toward market oriented policies)<sup>6</sup>.

High real interest rates and competitive rates of exchange are expected to lead to financial "deepening", as the ratio of financial assets to GDP increases. To sustain this process, financial and organizational regulations have to lay the legal and institutional framework for new financial instruments and institutions able to pool and diversify funds on the savings and investment sides of capital accumulation. Accordingly, the real effects of financial liberalization are expected to show up as an increase in the ratio of private savings (and hence of investment) and exports to GDP, thus "reviving" growth<sup>7</sup>. As the financial and real effects of financial liberalization become visible, market-determined interest rates and the rate of exchange are expected to come down gradually and fall in line with the reference standards for these macro-prices in an orderly managed economy: positive but moderate real interest rates, and credible and sustainable exchange rates (as approximations to their equilibrium prices in the medium to long term).

---

<sup>5</sup> A low and controlled rate of inflation is an important condition of bank performance and financial liberalization. High and variable inflation rates change relative prices and profits in ways which are difficult to predict. They foster higher credit risks, higher interest rates and a shortening of the period of financial transactions.

A public sector with a financial surplus is also important to bank performance and financial liberalization. A frequent policy to provide resources to an inadequately funded public sector involves imposing high reserve requirements and other "quasifiscal" charges on banks. The latter increase the spread through higher lending or active rates of interest and lower deposit or passive interest rates. Strong public finances therefore mean both lower interest rates and a greater availability of funds to the banking system.

<sup>6</sup> R. Mc Kinnon, *Money and Capital in Economic Development*, Washington D.C., (The Brookings Institution, 1973).

<sup>7</sup> E. Shaw, *op. cit.*, pp 3-14.

## 2. Organizational regulation

Norms concerning the "industrial" structure of banking are aimed at cost or operational efficiency of banks<sup>8</sup> and fortifying the banking system as a whole relative to financial stability.

Cost efficiency calls for norms promoting competition through entry barriers which allow a sufficient number of banks in order to prevent monopolistic practices, as well as banks of a sufficient size in order to take advantage of economies of scale. Cost efficiency also depends on norms defining the range of financial services, beyond granting loans and credit, which are open to banks. These norms aim at broader defined banking activities while taking advantage of scope economies in complementary financial services.

The large-scale capacity of banks to handle information and the increasing range of financial services in conjunction with financial development have fostered the expansion of specialized short-term commercial banking into "multibanking" and even into "universal" banking services<sup>9</sup>. This expansion exposes traditional commercial banks to the risks of a widening range of activities as well as to conflicts of interest stemming from a "principal agent" problem in so far as better results of the latter may affect the results of the former<sup>10</sup>. Arguments on behalf of prudential regulation set out below emphasize that commercial banks are financially fragile. Therefore, when they move into multibanking or into universal banking, norms regarding the structure of banking have to seek ways to "shield" the capital and results of core banking activities from the performance of parent firms offering other financial services<sup>11</sup>.

<sup>8</sup> Cost efficiency translates into low spreads or margins between lending or active interest rates and deposit or passive interest rates.

<sup>9</sup> Universal banks are able to offer a full range of financial services.

<sup>10</sup> Consider for instance a commercial bank which sets up a wholly owned mutual fund. If the bank issues bonds which are bought up by the mutual fund at above market interest rates, the profits of the bank will be lower and the profits of the mutual fund will be higher than otherwise.

<sup>11</sup> F. Morandé and J. M. Sánchez, "La Expansión del Giro Bancario Tradicional a los Negocios No Bancarios", in *La Banca Ante Nuevos Negocios y Mercados*, (Santiago, Asociación de Bancos e Instituciones Financieras de Chile, December 1992).

### 3. Prudential regulation

For the most part, prudential norms aim at preserving the solvency of banks. The latter are financially fragile for two main reasons. First, a distinctive feature of banks as firms is that payment of deposit or passive interest rates and the stock value of deposits and liabilities are contracted as fixed with the public, although lending or active interest rates and the recovery of loans and financial investments (at currency denominations which may partly differ from those pertaining to deposit and liabilities) are subject to risk of loss, and are thus variable in nature. Second, the financial structure of banks is highly leveraged<sup>12</sup>. Thus, the loss of a small proportion of assets can wipe out all capital<sup>13</sup> unless other of the bank's own funds are at hand.

The (accounting) capital of banks represents an effective capital or patrimony, provided all expected losses in assets (stemming from risk taking) have been properly measured and fully provisioned (out of profits). In this case, capital is an indicator of solvency and a measure of the ability to withstand unexpected losses. As long as effective capital is positive, a bank is able to pay all its deposits and liabilities out of its loans and financial investments (without having to draw on its own funds)<sup>14</sup>. De Juan has remarked that in the case of banks, insolvency invariably comes before illiquidity (while in the case of firms located in the real sector, illiquidity usually precedes insolvency)<sup>15</sup>. Thus non-payment of deposits and other liabilities by a bank is a clear sign that it is fully insolvent.

---

<sup>12</sup> The ratio of deposits and liabilities, or else their counterpart of loans and financial investments, usually exceeds capital by ten times or more.

<sup>13</sup> If loans and financial investments are equal to deposits and liabilities, this loss is equal to the inverse of the leverage ratio.

<sup>14</sup> Capital is the difference between correctly-valued assets and liabilities. If capital is positive, assets exceed liabilities.

<sup>15</sup> Banks are able to raise funds from the public and to sell financial instruments out of their portfolio to make cash. This allows them to meet their obligations though they may face acute insolvency. See Aristóbulo de Juan, "From Good Bankers to Bad Bankers: Ineffective Supervision and Management Deterioration as Major Elements in Banking Crises", World Bank, Washington, Country Economic Department, 1987, mimeo.

Non-payment of deposits and other obligations by some banks, particularly the larger ones, runs the risk of causing major external negative repercussions of a macroeconomic nature. It may lead to a "run" on banks and a massive deposit withdrawal, or a contraction of liquidity and credit in domestic financial markets as the public loses confidence in the banking system. In foreign markets, it can undermine the credit-worthiness of the country as a whole, and not only of insolvent banks. Similarly, a banking system which exhibits a strong solvency position produces positive macroeconomic external repercussions. It boosts public confidence in the payment system facilitating economic transactions; it diminishes the risks faced by agents and firms located in the real sector enhancing financial transactions; it mobilizes domestic financial savings which may otherwise remain idle, and allows access to foreign financial resources and the financing of projects which may not be undertaken otherwise. The above positive and negative external considerations are strong arguments in favour of controlling bank solvency.

Bank solvency problems can be dealt with via two principal measures. The first deals with causes of insolvency which can be prevented through "prudential" regulations and norms. The second refers mainly to measures avoiding the risk of bank runs or large-scale deposit withdrawals (which may result from non-deposit payment by some insolvent banks). The latter measures will be considered first.

#### a) State guarantee on deposits

The State can provide a guarantee on deposits to limit the risk of bank runs. However, insolvency risks increase due to the fact that a State guarantee "distorts" the return-risk relation by diminishing or eliminating the risk of losses to depositors and by stimulating banks to take on larger risks.

The return-risk relation calls for depositors and savers to make their decisions considering both the deposit interest rates offered by banks and the repayment prospects of their funds (as determined by the riskiness of banks' asset portfolios). However, as State guarantee coverage expands, deposit interest rates offered by banks have an increasingly greater influence on savers' and depositors' decisions as to which bank to choose. Evidently,

when there is a full State guarantee on deposits there is no asset risk for depositors; the only variable guiding depositors and savers is the level of the interest rate offered by different banks. The State guarantee on deposits also distorts the return-risk relation in bank portfolio management. A broad State guarantee allows banks to assume greater risks when making loans and financial investments without being exposed to deposit withdrawals themselves. Banks are therefore tempted to relax their credit and investment allocation processes. They are also able to enter more risky market segments without having to increase their deposit interest rates. Thus the larger the guarantee, the greater the probability that the Central Bank, as "lender of last resort", will have to cover the deposits of insolvent banks and assume bank losses.

A very important characteristic of the State guarantee on deposits is that it can be explicit or implicit. In the first case, there are written norms which set out the terms of the guarantee. In the second case, the public clearly understands that the Central Bank (or other public sector institution) will stand behind the deposits of insolvent banks. While the explicit State guarantee may be partial (leaving an element of risk in savings and deposit decisions), the implicit guarantee is distinguished by the fact that depositors and savers behave as if their funds are fully protected (that is, their decisions will depend only on the level of deposit interest rates offered by banks)<sup>16</sup>.

#### b) Deposit insurance

Deposit insurance has an important conceptual advantage in comparison to the State guarantee on deposits. Insurance premiums payable by banks, and eventually by depositors themselves, could be differentiated accord-

---

<sup>16</sup> Various factors can shape one's perception of an implicit State guarantee on deposits. The following are all important; lack of bank liquidations in the past due to the rescue of banks with solvency problems; the existence of public banks and large private banks in relation to the size of the domestic credit market, and foreign banks, which depositors believe will not be allowed to go under; introduction of a partial guarantee on certain deposits; and lack of transparency of bank solvency. In the latter case, economic agents are unable to distinguish among banks according to their risks. The State thus assumes somewhat of a moral duty to protect the savings and deposits of banks which become insolvent.



ing to the risk of banks losing their assets. However it is very difficult to make practical use of this advantage. So far, measurement of the various risks faced by banks does not rely on generally accepted procedures, nor are accepted methods at hand to sum up these risks in an overall index. For these reasons, insurance funds are generally built up on the basis of uniform premiums charged on all banks, to cover listed deposits up to certain amounts in cases of insolvency. This type of insurance has similar effects as a partial guarantee on deposits<sup>17</sup>.

c) Norms controlling solvency

These norms seek to limit risks and control bank solvency mainly by relying on "self regulation" by market participants. They aim to encourage bank directors and bank managers (in representation of shareholders) to adopt "safe and sound" loan and financial investment portfolio policies and decisions (taking on risks compatible with the high leverage of banks). At the same time, they seek to encourage depositors to exert market discipline on banks by taking into account both deposit (or passive) interest rates and the risk of loss of their funds at different banks when making their decisions.

Table 1 shows the objectives and content of a typical set of prudential norms intended for self-regulation of bank solvency. These norms address the main factors acting in favour of the financial stability of banks taking into account the macroeconomic external repercussions related to bank solvency and insolvency.

First, strict norms for entering the banking system. These norms require the "screening" of entrants and a barrier of minimum capital<sup>18</sup>.

Second, norms maintaining a solid capital base, net of expected risk of loss, for established banks. Accordingly, solvency norms aim at:

- Limiting the risks which banks are able to take on when making

<sup>17</sup> Depositors and savers tend to overvalue the deposit rate of interest banks in their decisions; banks can allocate funds to more risky market segments without fearing a withdrawal of deposits.

<sup>18</sup> Entry conditions for solvency reasons may be more demanding than the barriers on account of organizational regulations promoting competition.

Table 1  
PRUDENTIAL REGULATION OF BANK SOLVENCY

Objective of controls	Content of Controls
Strict entry conditions	<ul style="list-style-type: none"> <li>- Fairly high minimum entry capital</li> <li>- Standards of main shareholders, directors, and the head manager</li> </ul>
Risk-taking compatible with high leverage ratios	<ul style="list-style-type: none"> <li>- Ample loan and financial investment portfolio diversification (to control risks arising from fund concentration in economic agents, in economic sectors and in financial instruments)</li> <li>- Written norms on loans and collaterals (to control individual credit risks, particularly, of "related" loans (a))</li> <li>- Limits on active/passive funds with maturity mismatching according to their time profile (to control interest rate risks)</li> <li>- Limits on active/passive funds with currency mismatching according to their currency denomination (to control exchange rate risks)</li> <li>- Limits on fixed or immobilized assets and requirements of liquid financial instruments (to control liquidity risks)</li> <li>- Control of other risks affecting banks (b)</li> </ul>
Full recognition of measured risks or expected losses in asset portfolio	<ul style="list-style-type: none"> <li>- Accurate measurement of risks or expected losses in asset portfolio</li> <li>- Full risk provisioning or built up of reserves (out of profit)</li> <li>- Suspension of interest accruals on very risky loans</li> </ul>
Solid capital base	<ul style="list-style-type: none"> <li>- Speedy replacement of capital losses</li> <li>- Minimum capital requirements according to the risks of different assets</li> </ul>
Transparency of bank solvency to depositors and to the public	<ul style="list-style-type: none"> <li>- Periodic information to depositors and to the public on the solvency position of banks (including measured risks in their assets, amounts of provisions or reserves to cover expected losses, and effective capitals)</li> </ul>
Orderly exit from the banking system	<ul style="list-style-type: none"> <li>- Orderly liquidation of insolvent banks</li> <li>- Clear rules on preferential payment of certain deposits and obligations (such as checking account, small-scale savings, and Central-Bank credits)</li> </ul>

(a) Loans "related" to shareholders, director, and bank managers

(b) Mainly refers to off-balance sheet transactions.

loans and financial investments, particularly credit risks (or the risk of loan default), foreign-exchange risks (derived from lending or investing in a currency denomination which differs from the one pertaining to deposits and liabilities), and interest-rate risks (arising from lending or investment at fixed interest rates at longer terms than those for deposit and liabilities).

- An accurate measurement and full provisioning of all risks of loss in the asset portfolio of banks, and the suspension of interest accruals on high-risk loans.
- Building up the capital base of banks according to the risk profile of their loan and financial asset portfolio<sup>19</sup>.

The effectiveness of these norms in preserving the solvency of banks depends significantly on the timely and periodic furnishing of reliable information to depositors and the public concerning risk and capital indicators of banks, as well as how depositors and bank shareholders perceive their funds as being subject to losses depending on the riskiness of bank assets.

Third, norms dealing systematically with financial instabilities of different magnitudes, including timely recapitalization of banks with emerging solvency problems and orderly liquidation of insolvent banks. In the latter case, norms must clearly indicate the precedence of payments of deposits and liabilities out of the liquidation of assets, in favour of small-scale savers and of the Central Bank as "lender of last resort".

#### 4. Bank supervision

Bank supervision involves the activities of a public sector financial authority (usually a Bank Superintendency or possibly the Central Bank) geared to ensuring compliance with financial, organizational, and prudential regulations.

The efficacy of supervision in seeing that banks effectively comply with the prevailing norms depends mainly on the following factors:

1. A strong supervisory authority endowed with legal and financial

---

<sup>19</sup> Like the capital requirements agreed in the Basle Accord.

autonomy, capable of basing its activities on technical criteria and of fending off political interests and pressure groups.

The supervisory authority should be sufficiently endowed with highly qualified personnel in legal, accounting, financial, and information processing matters, in order to provide technical support for banking norms and their fulfillment. The cornerstone of solvency supervision is a periodic assessment of the risks of loan losses in the financial-asset portfolios of banks, on the basis of a reliable and uniform procedure.

2. A clear division of tasks among supervisory authorities of the financial system, once banks expand towards multibanking or universal banking, in order to cover all financial transactions and services and to avoid the overlapping of supervision<sup>20</sup>. If a deposit insurance fund is in operation, it is also important to separate its tasks from those of the supervisory authority of the banking system in cases of bank insolvency.
3. Clearly-specified banking norms and well-defined and calibrated sanctions to discourage non-compliance.

## 5. Arrangements for the regulation of bank solvency

The regime pertaining to State guarantee or insurance on deposits (and other bank liabilities) together with the set of "prudential" controls or norms with regard to solvency, are the two main components of a system of bank solvency regulation<sup>21</sup>. According to Feller, the combination of these two components yields the four institutional arrangements on regulation of bank solvency shown in Table 2.

<sup>20</sup> This is easier to achieve by organizing supervision according to functions or financial services, i.e. credit, loans, insurance and others, instead of financial institutions, i.e. banks, insurance companies, and so on.

<sup>21</sup> This section admits that if deposit insurance is available, premiums, are uniform, and thus insurance is similar to a partial guarantee on deposits.

a) Free or non-regulated banking (as regards solvency)<sup>22</sup>

In a system of free or non-regulated banking, there is no State guarantee on deposits nor rules controlling bank solvency. Depositors and savers assume substantial risks when placing their funds. Accordingly, they are expected to exercise great precaution when choosing a bank. Macroeconomic externalities of banking activities in developed or formal financial markets appear to have turned free banking into a theoretical alternative.

b) Public-sector controlled banking

A large, explicit State guarantee on deposits, or an implicit State guarantee, induces savers and depositors to fully ignore the insolvency risks of banks. They are motivated only by the highest deposit interest rates offered by banks for their funds. Thus, maintaining bank solvency depends entirely on prudential regulation controls (and on its supervision). This task calls for a rigorous definition of the set of norms mentioned in table 1.

c) Biconrolled banking

The absence of an explicit or implicit State guarantee, or of deposit insurance, encourages depositors and savers, especially those handling large amounts, to assume an active market-disciplining role by assessing banks according to their risks and deposit interest rates<sup>23</sup>. To perform this function, depositors and savers must be informed about bank solvency indicators. At the same time, prudential regulation norms limit bank risks and establish risk provisioning and capital requirements. Since both depositors and a public-sector financial authority assume solvency control functions, this arrangement is tantamount to "biconrolled" banking<sup>24</sup>.

<sup>22</sup> Free banking differs from non-regulated banking as regards solvency, in that the former is not subject to financial and organizational norms nor to prudential norms.

<sup>23</sup> Banks carrying larger risks in their asset portfolios will have to pay higher deposit rates of interest.

<sup>24</sup> In this arrangement prudential norms should be gauged taking into account the market dis-

Table 2  
 INSTITUTIONAL ARRANGEMENTS FOR BANK SOLVENCY REGULATION (a)

Deposit Guarantee	Solvency controls	
	Without solvency controls	With prudential regulation controls
Without deposit guarantee	Free or non-regulated Banking Banks subject to the control of depositors	Biconrolled banking Banks subject both to the control of depositors and of a public-sector financial authority
With deposit guarantee (explicit or implicit)	Uncontrolled Banking Banks not subject to controls of depositors nor of a public-sector financial authority	Public-sector controlled banking Banks subject to the control of a public-sector financial authority

(a) Adapted from A. Feller, "Supervisión, Regulación y Riesgos Bancarios", Superintendencia de Bancos e Instituciones Financieras, *Información Financiera* (Santiago, Chile, May 1985), pp. ix-xi.

#### d) Uncontrolled banking

A total explicit or implicit State guarantee on deposits leads depositors and savers to take into account only interest rates when making their decisions, fully ignoring bank solvency risks. At the same time, there is no prudential bank regulation. Banking norms refer mainly to accounting procedures and financial norms concerning reserve requirements, directed credit allocations, and financial investment in public-sector instruments. In this arrangement neither depositors nor a public-sector financial authority are concerned with bank solvency risks, thus representing a situation of "uncontrolled" banking as regards solvency.

Deregulating or liberalizing credit in this context can easily lead to

---

discipline role of depositors and savers. Too rigorous norms can lead banks to adopt highly conservative loan and financial policies, taking on less risks than are socially desirable. Loans for small -and medium- scale firms, especially agents wishing to start an economic activity, may get little credit since prudential norms may consider that they are too risky. Thus bank solvency indicators may be very good, although the establishment may not finance socially profitable investment projects.

excessive high risk credit due to the lack of "filters" or restrictions on demand for bank funds. At the level of firms and banks, this translates into a significant number of high-risk projects, uncollectable loans and large expected bank losses. The counterpart at the macroeconomic level is excessive aggregate expenditure, high real interest rates (and inflationary pressure). This process can be accumulative as very high real interest rates drag down solvent bank debtors<sup>25</sup>.

## II. BANK REGULATION IN THE CHILEAN FINANCIAL LIBERALIZATION EXPERIENCE

The Chilean financial liberalization of the mid-1970s resulted from an evaluation of economic policies which had "repressed" bank credit, savings and exports owing to import substitution and interventionism in previous decades<sup>26</sup>. These reforms also envisaged opening the economy up to foreign trade and capital, and shifting resources and decision-making to the private sector. Since the economy was faced with triple-digit inflation between 1974 and 1975, stabilization measures were implemented simultaneously with structural reforms<sup>27</sup>.

The banking system which prevailed in 1974-75 was made up of specialized banks, mainly commercial banks, limited to short-term transactions.

---

<sup>25</sup> As Feller points out, there comes a point when the government perceives that the situation is unsustainable. But at this stage, the restoration of solvency of both banks and debtors invariably means large financial losses for the State. (A. Feller, "Supervisión, Regulación y Riesgo Bancario", *Información Financiera*, Santiago, Superintendencia de Bancos e Instituciones Financieras, May 1985).

<sup>26</sup> The setting of (nominal) interest rates and the rate of exchange in inflationary conditions frequently led to negative real rates of interest and, most of the time, to a substantially overvalued domestic currency. At the outset of liberalization policies in 1975-76, bank loans averaged only 9.3 per cent of GDP, national savings 11.2 per cent of GDP (though 14 per cent represented historical levels), and exports of goods and services 25.2 per cent of GDP (though 20 per cent were closer to historical levels).

<sup>27</sup> For short but forceful statement regarding the evaluation and changes in the economic policy régime see S. de Castro, "Exposición sobre el Estado de la Hacienda Pública", *Boletín Mensual*, Banco Central de Chile, January 1978, and P. Barahona and M. Gómez, "Esfuerzos de Estabilización en Chile", *Boletín Mensual*, Banco Central de Chile, October 1975.

Virtually all banks had also been taken over by the State in 1970-73. The banking reform thus had two main components. First, financial liberalization of credit and interest rates and related measures concerning reserve requirements, a broader funding base and access to foreign capital. Second, organizational measures aimed at a private and competitive banking system and the first steps toward multibanking by authorizing banks to undertake longer term transactions and mortgage operations.

### 1. Measures and financial consequences of bank reform

Bank privatization proceeded swiftly after September 1975. Virtually all banks had been sold to the private sector by the end of 1978, with the exception of the State Bank. Banks were privatized at the same time as a large number of firms in the real sector, which had also been taken over by the State in 1970-73. This procedure soon led to economic "groups", as bank owners used their banks' credit to purchase firms offered for sale. Interlocking ownership and management of banks and firms in the real sector would enhance the meaning of "related" loans in credit liberalization.

Administrative and legal barriers to the banking system were lifted with the aim of fostering competition. Foreign banks could enter the domestic market at the end of 1974 while foreign investment in banking became possible in January 1977. At the end of 1974 the Superintendency of Banks regulated the activities of financial establishments<sup>28</sup>. Between 1974 and 1981, the number of banks increased from twenty-one to forty-five, foreign banks went from one to eighteen, while seventeen financial establishments were in operation at the end of 1981.

Quantitative credit allocations were lifted at the end of 1973. In June 1977, the authority of the Central Bank to establish credit guidelines was severely limited. After partial deregulation of interest rates in 1974-75, they could be freely negotiated starting in December 1975. Taking account of ongoing inflation, all debt transactions due in more than ninety days

---

<sup>28</sup> Financial establishments are unable to offer checking accounts and to finance foreign trade transactions. They devote themselves mainly to financing household purchases of durable consumer goods.



could be indexed to the CPI after July 1976. Reserve requirements for sight and time deposits were reduced starting in 1975 and 1976, and levelled out at 10 per cent and 4 per cent respectively in 1980. Restrictions on the acquirement of foreign debt by banks were gradually removed after December 1977 and virtually abolished in April 1980. However, controls were kept on outflows of capital. These were instrumental in maintaining foreign funds in the banking system and in increasing the financing role of the latter. In 1981 all loan and financial-asset portfolio growth of the banking system was due to foreign debt financing.

The financial liberalization measures were soon followed by abnormally high rates of growth of the banking system's loan (and financial-asset) portfolio and of interest-rate levels, as well as by extremely large interest spreads<sup>29</sup>. Column 1, Table 3 shows these figures for 1978-80, four years after financial liberalization got under way in order to dampen the effects of inherited financial "repression" on the behaviour of banking variables. Loan (and financial-asset) portfolios grew on the average at almost 40 per cent a year in real terms (equivalent to five times the GDP growth rate), while average real rates of interest on the outstanding stock of loans (and financial assets) stood at around 20 per cent a year (equivalent to two and a half times the GDP growth rate). Gross spreads were almost 10 per cent a year. They covered provisions and write offs of risk-prone loans of 1.7 per cent a year (indicating an apparently sound portfolio growth), and hefty administrative and other current expenses of 5.2 per cent a year (suggesting operational inefficiencies). Gross spreads also provided for a substantial profit rate of 22 per cent on capital (achieved with an average asset ratio of nine). The above indicators reflected a booming banking system which looked profitable and safe.

Yet a solvency crisis of unexpected magnitude erupted in 1981, leading to large-scale intervention of the banking system. Between 1981 and 1984 the Superintendency of Banks and Financial Institutions intervened in fourteen private domestic banks, including the two largest private banks in 1983, and eight financial establishments, out of twenty-six domestic pri-

<sup>29</sup> On the behaviour of interest rates see R. Zahler "Las tasas de interés en Chile: 1975-82", *El Desarrollo Financiero de América Latina y el Caribe 1985*, (Caracas, Instituto Interamericano de Mercados de Capital, 1985).

Table 3  
CHILE  
Bank Behaviour at the Peak of Financial Liberalization (1978-80) and after  
the Recovery of Solvency and Prudential Regulation Reform (1986-91)  
(in %, with the exception of the asset leverage ratio)

	1978-80	1986-88	1991-92
Real rate of growth per year (%)			
a) Loan and financial-asset portfolio	38.7	-3.1	6.5
b) Deposits and liabilities	39.8	-4.9	7.5
Gross Domestic Product (GDP)	8.1	6.2	8.2
Real average rates of interest per year (%)			
a) Loan and financial-asset portfolio	19.6	8.2	8.7
b) Deposits and liabilities	13.0	5.9	6.1
Yearly spread as % of assets (a)			
a) Interest rate spread	6.9	2.6	3.0
b) Gross spread	9.8	5.0	6.1
Yearly expenditure as % of assets (a)			
a) Provisions and loan write offs	1.7	1.0	1.0
b) Administration expenses	5.2	2.2	3.5
Results before tax as % (a)			
a) Assets (a)	2.4	1.5	1.5
b) Capital and reserves	21.7	21.3	19.2
c) Asset leverage ratio = (b/a)	9.0	14.2	12.8

(a) Total bank assets.

Source: Información Financiera, Superintendencia de Bancos e Instituciones Financieras Santiago, December issues of 1978 to 1991

vate banks and seventeen financial establishments which were in operation in 1981. Banks and financial establishments which had grown at spectacular rates before the crisis virtually all underwent intervention and liquidation. Eight banks and all financial establishments affected by intervention were closed down.

The generalized financial crisis among domestic banking institutions and debtors called for large-scale recovery measures. Bad loans which had been sold to Central Banks by the end of 1985 were equivalent to 28 per cent of the outstanding loan portfolio, 18 per cent of GDP, and on the average over three times the capital of banks and of financial establishments which made use of this alternative. But if one takes into account bad loans made by closed banks and financial establishments, and interest

rate and exchange rate subsidies involved in large-scale debt reprogramming, the estimated financial losses of the Central Bank were around 40 per cent of GDP of 1989<sup>30</sup>.

In seeking to explain these extraordinary losses under financial liberalization, two main factors stand out: unfavourable macroeconomic conditions and the widespread failure of prudential regulation and supervision.

a) Unfavourable macroeconomic conditions

The simultaneous implementation of structural reforms and stabilization policies (and occasionally inconsistent economic policies, economic shocks, overly ambitious growth expectations, and other events), frequently led to sharp changes in relative prices and profitabilities among firms and economic sectors, with subsequently erroneous profit and risk signals<sup>31</sup>. Excessive bank lending, along with high credit risks and interest rates, are thus interpreted as "transmission mechanisms" of macroeconomic factors.

The following macroeconomic policies led to large relative price and profit shifts between economic activities, and consequently to substantial credit risks and solvency problems among banks and debtors:

- In 1974-77, a foreign-trade reform which lowered nominal tariffs from an average of 105 per cent in 1974 to 10 per cent in 1977, amid macroeconomic adjustment which reduced GDP by 13 per cent in 1975 and a stabilization policy which brought inflation down from the triple-digit level in 1974-76 to around 60 per cent in 1977.
- In 1978-82, the effects of the adoption in February 1978 of the nominal exchange rate as a stabilizing factor in the form of fixed, preannounced and diminishing rates of devaluation, in the presence of high domestic interest rates and wage indexation clauses. This policy brought inflation down, but a rate comparable to that of industrialized countries was not achieved until early 1982. In the

<sup>30</sup> N. Eyzaguirre and O. Larrañaga, *Macroeconomía de las operaciones cuasifiscales en Chile*, (Santiago, SECLAC/UNDP, August 1990).

<sup>31</sup> S. Edwards, *Stabilization with Liberalization: An Evolution of Ten Years of Chile's Experiment with Free Market Policies 1973-83*, (EDCC, University of Chicago Press, January 1985).

meantime, the virtual elimination of foreign-exchange risk had produced a wide gap between real lending rates in domestic currency and in foreign currency (of ex-post 13 per cent in 1980 and 40 per cent in 1981), and stimulated large foreign-debt-financed capital inflows. The latter led to yearly domestic expenditure increases of over 10 per cent in real terms between 1978-81, and in conjunction with wage indexation, to an accumulated drop in the real exchange rate of 33 per cent by mid-1982. The profitability and solvency of export and import competing sectors had gone aground, while real estate and other non-tradeables were getting a larger share of bank credit<sup>32</sup>.

- In 1982-1983, the effects of a drastic balance of payments adjustment, on account of the abrupt interruption of foreign capital flows following the Mexican debt moratorium of March 1982. GDP fell 15 per cent, and after the exchange rate started to float in June 1982, its real value increased around 70 per cent by the end of 1983. These adjustments caused solvency problems for debtors located in non-tradeable activities and in other sectors.

The above macroeconomic conditions are certainly important in explaining the large-scale financial crisis of the early 1980s. However, for the following reasons they are also quite insufficient. The banking-system loan portfolio had grown by around 38 per cent in 1980 (as compared to 9 per cent in 1975-76), suggesting that credit "repression" was no longer important. Yet, the loan portfolio was growing at 46 per cent in real terms in that year and real lending rates of interest still stood above 18 per cent, both quite out of line with GDP growth or other macroeconomic activity indicators. Then, the financial crisis started in 1981, after five years of strong growth, while the economy was growing at 5.5 per cent a year, and before the severe macroeconomic adjustment of 1982.

<sup>32</sup> J.A. Fontaine, "Crecimiento, recesión y mercado", *Estudios Públicos* (Santiago), Nº 11, 1983; V. Corbo, J. de Melo and J. Tybout, "What went wrong with the recent reforms in the Southern Cone", (Washington D.C.: World Bank, 1985, Report DRD 128).

## b) Prudential regulation failures

Vigorous prudential regulation and supervision were particularly required in a rapidly liberalized banking system with insufficient loan management experience, and which started extending credit to firms very short of funds following the economic and political turbulence of 1970-73. However, the only noticeable measure in favor of bank solvency which was taken during financial liberalization was the increase, on various occasions between 1974 and 1980, of minimum capital requirements for banks and financial establishments<sup>33</sup>.

By 1977, the distinctive features of "uncontrolled" banking as regards solvency (discussed in section I) can clearly be seen: lack of prudential norms controlling solvency and a full State guarantee on deposits. Under these conditions, banks were not merely recipients of high-risk loans due to macroeconomic imbalances and distorted macroeconomic prices. They were able to put in place a high-growth high-risk credit "mechanism" which generated solvency problems as soon as credit and interest rates had been liberalized. Thus excessive loan-portfolio growth reflected both defective norms controlling the demand for bank credit, as well as an inability to regulate the supply of funds due to the State guarantee on deposits. Public-sector financial authorities exerted no prudential regulation and supervision, nor did depositors play a role in disciplining the market.

### *i. Defective norms controlling solvency*

Essential aspects of the credit process were at fault: guarantees or collaterals as a second source of loan repayment, limits on individual credit to avoid risk concentration, and the handling of high-risk overdue loans.

Very weak collaterals are evident in "goods received in payment" for bad loans. Of the loans which banks and financial establishments sold to the Central Bank in 1981-83 as part of measures to rescue troubled insti-

<sup>33</sup> The minimum capital of banks went up from US\$ 2.5 million to around US\$ 10 million; that of financial societies from US\$ 0.4 million to around US\$ 5 million. The financial crisis of the early 1980s demonstrated the pitfalls of attempting to face solvency problems by merely strengthening capital bases. The latter proved totally insufficient to cover accumulated losses.

tutions, only 4 per cent were backed up by such goods at the end of 1985. Limits on individual credit were amply exceeded in the case of "related" loans by lending to fictitious firms and other practices. It is estimated that up to 50 per cent of bad loans which banks undergoing intervention in 1981-83 sold to the Central Bank were "related" (and had virtually no collateral). Indirect evidence regarding interest capitalization and the rolling over of overdue loans is provided by the fact that while loans were growing at abnormal rates, interest-income accruals by banks were very high; after they had sold their large stock of bad loans to the Central Bank, both the growth rate of their loan portfolio and the lending rates dropped sharply (see second and third column of Table 3).

Not until 1980 did the Superintendency of banks introduce a method to classify loans according to risk categories. The public was evidently not informed of expected losses; however, these losses led to intervention in the banking system starting in 1981, in order to gauge the magnitude of the recovery measures. Therefore, neither the Superintendency nor depositors and shareholders had access to reliable information on portfolio quality -and consequently on effective results and capital figures of bank and financial establishments- in the course of financial liberalization. The high profitability shown in column 1 of Table 3 was fictitious as it followed mainly from accounting as income interest accruals on high-risk loans and from insufficient provisioning of these risks.

## *ii. State guarantee on deposits*

Lack of public information on portfolio risks and veritable solvency indicators of banks and financial establishments opened the door to an implicit State guarantee on deposits (and other liabilities). An unmistakable step in this direction had already been taken in 1975-76 when an emerging financial crisis led to intervention in and recovery of a medium-sized commercial bank, and to the introduction in January 1977 of a State guarantee on deposits denominated in domestic currency equivalent to around US\$ 3,000 (at the current rate of exchange). In January 1991, this guarantee was complemented by a voluntary deposit insurance covering additional deposits in domestic currency up to the equivalent of around US\$ 3,500. Depositors completely overlooked this option, in the belief that the State was fully protecting their funds.

c) Loan-portfolio growth and financial crises as an outcome of "uncontrolled" banking

The mechanism of abnormal loan-portfolio growth contained large flows of "related" and other non-collateralized credit, the capitalization of high accrued lending rates of interest and the rolling over of loans subject to risk. The process leading to a credit "bubble" can be described by dividing the real rate of growth of bank loan portfolios into two components: the rate of growth of normal-risk or "legitimate" credit ( $l$ ), and the rate of growth of high-risk or "false" credit ( $f$ ), defining both rates in the outstanding portfolio and when granting or renewing loans. False credit may in turn be split up into the rate of growth of new "false" credit ( $f_1$ ) and capitalized interests stemming from the rolling over of high-risk credit ( $f_2$ ). If "a" is the proportion of interest accruals which is paid and "r" is the real interest rate on the loan portfolio,  $f_2 = (1 - a)r$  stands for capitalized high-risk interest accruals. The real rate of growth of the loan portfolio ( $p$ ) can thus be written:

$$p = l + f = l + f_1 + (1 - a)r \quad (1)$$

The annex contains a rough simulation with a breakdown of the 39 per cent yearly growth rate of the loan and financial asset portfolio of the banking system in 1978-80. "Legitimate" credit would have expanded at around 22 per cent in real terms a year, or at three times the GDP growth rate, while "false" or very high-risk credit would have grown at 17 per cent in real terms a year, or at twice the speed of GDP. Of the latter, about 10 per cent may stand for the capitalization of interest rates and 7 per cent for the granting of new "false" credit.

The implicit State guarantee on deposits and liabilities stands out when one seeks to explain the behaviour of debtors and bankers as regards agreeing on "false" credits, and of depositors and lenders to the banks as regards providing finance. Once the former perceived that insolvency problems were becoming widespread, collusion on rolling over bad loans, capitalizing interest, and extending related credit became profitable in the belief that the State would provide a large-scale bail-out<sup>34</sup>. Once the latter perceived that they could count on a State guarantee, depositors and even foreign banks were willing to provide funds.

## 2. The bank reform of 1986

The bank reform of November 1986 aimed at an institutional arrangement of "bicontrolled" banking as regards solvency regulation (as set out in Table 2 above), and at multibanking vis-à-vis the structure of the banking system.

The reform introduced all the prudential solvency norms mentioned in Table 1. At the same time, it withdrew the State guarantee on deposits, excluding only sight deposits which earned no interest and small-scale savings<sup>35</sup>, with a view to incentivating the market-disciplining role of depositors. Multibanking was extended by authorizing complementary financial services to grant loans and credit (leasing, administration of mutual funds, securities dealings and investment bank activities). The provision of these services require affiliated but independent establishments with their own capital, and are subject to limits as regards bank lending, so as to fully shield the banks' own capital and results.

The prudential regulation framework contained novel features which provided transparency concerning risk and capital among banking institutions, set up self-regulating measures to recover solvency, and relied on the level of deposit rates of interest as an indicator of solvency problems.

### a) Transparency vis-à-vis credit risk and effective capital

Table 4 defines credit risk categories for the loan portfolio and an example of credit risk assessment of two banks starting in May 1987. The lower part of this table shows the "effective" capital position of the same two banks also starting May 1987, when the above information was made public for the first time by the Superintendency of Banks. The capital position is shown by means of a coefficient where the numerator is "effective" capital, the denominator accounting capital, and with the following variables:

<sup>34</sup> N. Eyzaguirre, "Crisis Financiera, Reforma y Estabilización: La experiencia Chilena", Banco Central de Chile, Santiago, 1992, mimeo.

<sup>35</sup> The State guarantee covers time deposits by natural persons equivalent to around US\$ 2,400 (at the rate of exchange at the beginning of 1993), with a limit of 90 per cent of this amount.



C = Accounting capital and reserves (excluding provisions for assets subject to risk)

Prov = Provisions on risks of loss of loans and financial assets

R = Current result (profit or loss)

L = Expected risk of loss in loan and financial-asset portfolio

The effective capital coefficient (ecc) is<sup>36</sup>:

$$\text{ecc} = ((C + \text{Prov} + R - L)/C)100 \quad (2)$$

Table 4

CHILEAN PRUDENTIAL REGULATION BANK REFORM OF 1986 TRANSPARENCY OF CREDIT RISK AND OF EFFECTIVE CAPITAL OF BANKING INSTITUTIONS

1. Credit risk categories	Category	Expected losses in %
Normal risk	A	0
Potential risk higher than normal	B	1
With expected losses	B-	20
With substantial expected losses	C	60
Non-recoverable	D	90

2. Expected losses as percentage of loan portfolio

Bank	May 1987	May 1990	February 1993
American Express	3.51	3.36	1.98
Concepción	3.51	3.58	3.24
Average for banking system	6.58	4.18	2.43

3. Effective capital coefficient, ecc = (Effective capital/Accounting capital) 100

Bank	May 1987	May 1990	February 1993
American Express	105.7	106.9	102.6
Concepción	108.8	129.5	116.3
Average for banking system	107.0	116.9	106.4

Source: Superintendencia de Bancos e Instituciones Financieras, Información Financiera, Santiago, different issues.

<sup>36</sup> Thus, if ecc > 100 or if ecc < 100, effective capital exceeds or falls short of accounting capital by the percentage difference to hundred.

b) Assumptions regarding financial stability and self-regulating solvency measures

Assumed financial problems are defined on the basis of the "percentage of capital at risk" (pcr), which is the complement of the effective capital coefficient when the latter is less than 100 per cent (that is, when effective capital falls below accounting capital):

$$\text{pcr} = (100 - \text{ecc})\%, \text{ecc} < 100 \quad (3)$$

If the percentage of capital at risk is approximately between 20 per cent and 40 per cent, that is, when expected asset losses (not covered by provisions) threaten 20 per cent to 40 cent of the accounting capital<sup>37</sup>, prudential regulation presumes "financial instability". To overcome this situation, shareholders are required to supply fresh capital on short notice<sup>38</sup>. If on the other hand, the percentage of capital risk reaches 60 per cent or more, that is, if expected asset losses (not covered by provisions) threaten that percentage of accounting capital, or more, prudential regulation presumes "severe solvency problems". In this case, in addition to fresh capital supplied by shareholders, a committee of bank creditors can transform deposits into capital and take other measures to reduce deposits and liabilities in order to re-establish the solvency of the bank or financial society<sup>39</sup>.

<sup>37</sup> The precise percentage of capital at risk depends on the leverage ratio of the bank of financial establishment. The higher the leverage ratio, the lower the admitted percentage of capital at risk.

<sup>38</sup> If this capital is not forthcoming or deemed insufficient by the Superintendency, the bank or financial establishment in question is not permitted to expand its loan and financial-asset portfolio, with the exception of the purchase of financial instruments issued by the Central Bank.

<sup>39</sup> Full insolvency is not defined, but banks and financial establishments assumed to incur "severe solvency problems" run the risk of being liquidated if no corrective measures are forthcoming. If the Superintendency of Banks decides to liquidate, sight deposits and small savings are protected by the State guarantee, while the Central Bank enjoys priority in recovering both its loans to the affected financial establishment and its disbursements to cover protected deposits.

c) Control of deposit interest rates

The link between high growth of non-performing loans and pressure on deposit interest rates (as the former do not provide a cash flow and hence require the raising of funds) led to a further assumption of financial instability. Banks or financial establishments which paid interest rates exceeding the average rate paid by the same kind of financial institution in three or more months of a same year by a fifth or more are also presumed unstable. Consequently, these banks and financial establishments are not allowed to increase their loan and financial-asset portfolio (with the exception of financial instruments issued by the Central Bank), until their shareholders supply fresh capital deemed adequate by the Superintendency of Banks.

### 3. Bank reform, bank performance and financial liberalization

The vigorous prudential regulation reform implemented at the end of 1986, the related measures to restore the solvency of banks and debtors between 1982-86, and the orderly macroeconomic conditions prevailing since 1985-86 led to a structural change in the performance of banks and to a new environment for financial liberalization.

The change in bank performance took place while fully maintaining credit and interest-rate liberalization<sup>40</sup>. All banking institutions have remained solvent since 1986. At the same time, as the second and third columns of Table 3 show, after initially falling, the rate of growth of the banking system's loan and financial-asset portfolio has recently kept in line with the rate of growth of GDP. Lending (or active) and deposit (or passive) interest rates dropped by half, although the latter have remained attractive in real terms; spreads also dropped by half on account of similar reductions in portfolio expenditures, approaching international standards.

National savings increased from 10 per cent of GDP in 1985-86 to 22 per cent in 1990-92, an increase made up mainly of private savings (of

<sup>40</sup> The Central Bank "suggested" short-term deposit interest rates between 1982-86, while the financial crisis was overcome.

which around 3 per cent is due to the pension-fund reform of 1981); exports of goods and services reached a peak of 35 per cent GDP in 1990-92, backed by record high real export rates of exchange in 1988-91; inflation has been kept at nearly 20 per cent or less a year (in a highly indexed economy)<sup>41</sup> and GDP has been expanding at above 6 per cent a year, both since 1986. The "revival" of growth and the behaviour of financial and real variables, quite akin to the results predicted by the financial liberalization approach, merit close attention under this policy and relative to the interrelationship among these variables<sup>42</sup>.

In the meantime, the highly successful bank reform of 1986 created new issues. It only partially achieved the objective of establishing a regime of "bicontrolled" banking as regards solvency. Although pension funds, insurance companies and other institutional investors follow closely the solvency indicators of banking institutions shown in Table 4, there is evidence that a large proportion of depositors still behave as if their funds were fully protected by the State<sup>43</sup>. What was achieved may be closer to public-sector-controlled banking. This has led to proposals which enlarge the role of the private sector in evaluating the risk of the loan and financial-asset portfolio pertaining to banking institutions, and which render the risk of deposit capitalization and of deposit losses in cases of insolvency feasible<sup>44</sup>. Rapid development of the capital market since the mid-1980s brought about by the pension fund reform of 1981 has also led the banking sys-

---

<sup>41</sup> The CPI measured inflation was 27 per cent in 1990 but approached one digit rates at the end of 1992.

<sup>42</sup> While the real rate of exchange appears as essential in explaining the expansion of exports and tradeables; it can be argued that a further fall in interest rates requires more national savings (instead of attempting to rely on higher rates to incentivate household savings).

<sup>43</sup> The following factors may have contributed to this result: the explicit guarantee on sight deposits and on small scale deposits, the preponderant role of the Superintendency of Banks in measuring risks and in controlling solvency, and the requisite that banks and financial societies have to repurchase the bad loans which they sold to the Central Bank and are thus hardly expected to break down.

<sup>44</sup> Since Institutional investors keep themselves informed on the solvency position of banks and financial societies, they will withdraw their deposits before the "capital at risk" of a bank reaches the critical ratio of 60 per cent, that is, when deposit capitalization under a creditors committee is to take place.

tem to seek further expansion of its activities including insurance, pension-fund management, and a wider array of international financial transactions<sup>45</sup>.

### III. OVERVIEW OF RECENT FINANCIAL INSTABILITIES IN LATIN AMERICAN AND CARIBBEAN COUNTRIES

#### 1. Sample of countries exhibiting financial instability

Table 5 provides an overview of countries in the region where banks and other credit institutions have faced solvency problems in the last two decades.

Argentina, Chile and Uruguay make up the well-studied "Southern Cone" experiences of the 1970s dealing with stabilization, economic reform and financial liberalization<sup>46</sup>. On account of the entrenched import-substitution industry in Argentina and Uruguay, financial liberalization took place before commercial reform. Between 1974 and 1979 in both countries a number of measures liberalized interest rates and bank credit, the exchange rate and foreign-exchange operations, as well as reducing reserve requirements and other quasi-fiscal charges on banks. In 1974 both countries liberalized private inflows and outflows of capital.

Argentina and Uruguay followed Chile's lead in carrying out financial liberalization amidst a very unstable macroeconomic environment and severe shortcomings in prudential regulation and/or supervision.

Yearly inflation rates of 170 per cent in Argentina and 50 per cent in Uruguay in 1977-78 led both countries to adopt the nominal rate of exchange as an anchor of stabilization at the end of 1978. Annualized inflation rates still stood at 70 per cent in Argentina and 25 per cent in Uruguay at the beginning of 1981, while the real rate of exchange had dropped to half in both countries. Contributing to this situation were pre-

<sup>45</sup> *La Banca ante Nuevos Negocios y Mercados*, Santiago, Asociación de Bancos e Instituciones Financieras de Chile, 1992.

<sup>46</sup> ECLAC, *Estabilización y Liberación Económica en el Cono Sur*, Santiago, Estudios e Informes CEPAL, 1984, N° 38.

Table 5  
BANK SOLVENCY PROBLEMS IN LATIN AMERICAN AND CARIBBEAN COUNTRIES

Country	Period	Financial regulation	Key macroeconomic conditions	Prudential regulation and supervision	Out Stability of financial system	Come Financial prices
Argentina	1974-81	Credit and interest rate liberalization. Early opening of capital account.	Fiscal imbalance and high inflation. Stabilization based on the rate of exchange (1979-81).	Severe shortcomings.	Large banking crises.	High real rates of interest. Lagging rate of exchange.
Chile	1974-82	Liberalization of credit and interest rates.	Structural reforms. Stabilization based on the rate of exchange (1978-1982).	Severe shortcomings.	Generalized banking crises.	High real rates of interest. Lagging rate of exchange.
Uruguay	1974-82	Credit and interest rate liberalization. Early opening of capital account.	Current account imbalance. Stabilization based on the rate of exchange (1979-1982).	Severe shortcomings.	Large banking crises.	High real rates of interest. Lagging rate of exchange.
Colombia	1979-82	Sectoral credit allocations.	Fairly stable macroeconomic conditions.	Severe shortcomings.	Large banking crises.	Fragmented interest-rate structure.
El Salvador	1980-89	Directed credit and setting of interest rates.	Large fiscal deficit. Inflationary pressure.	Severe shortcomings.	Large banking crises.	Financial repression.

Table 5 (Cont.)

Country	Period	Financial regulation	Key macroeconomic conditions	Prudential regulation and supervision	Out Stability of financial system	Come Financial prices
Dominican Republic	1982-90	Sectoral credit limits and setting of interest rates.	Fiscal imbalance. Growing inflation.	Severe shortcomings.	Financial crises in non-regulated financial sector. Hidden solvency problems in regulated banks(?).	Financial repression of regulated banks. High real rates of interest in non-regulated sector.
Costa Rica	1983-87	Credit liberalization and gradual deregulation of interest rates.	Stabilization and balance of payment adjustment.	Important improvements in prudential regulation and supervision.	Financial crises in non-regulated financial institutions.	High real rates of interest in non-regulated financial sector.
Bolivia	1985-90	Credit and interest-rate liberalization.	Stabilization and structural reforms following large fiscal deficits and hyperinflation.	Severe shortcomings.	Some insolvent banks. Weakened solvency of banking system.	Very high real lending rates of interest.
Peru	1990-92	Credit and interest-rate liberalization.	Stabilization and structural reforms, following large fiscal deficits and hyperinflation.	Shortcomings in provisions and recapitalization norms.	Solvency problems in commercial banking sector.	Slow decline of very high real lending rates of interest.

vailing public-sector deficits -particularly in Argentina- tariff reductions carried out at this stage of economic reform, and very large foreign-debt-financed capital inflows. The latter resulted from the huge differential in the real lending rates of interest in domestic currency and in foreign currency (of ex post 50 per cent a year in Argentina and 20 per cent a year in Uruguay in 1979-80), and from an exchange-rate policy which had virtually eliminated foreign-exchange risk.<sup>47</sup>

Real domestic lending rates of interest also declined while fluctuating drastically due to high and variable inflation rates. However, they started to climb in Argentina in 1980 and in Uruguay in 1981, when it became clear that current exchange rates were unsustainable (and also because international interest rates increased to unusually high levels). Domestic lending rates of interest rose to 40 per cent a year in real terms in the second half of 1980 and the beginning of 1981 in Argentina, and in 1982 in Uruguay. Nevertheless between 1979 and 1983 capital flight equivalent to more than 90 per cent of the foreign debt of the former and to more than 60 per cent of the foreign debt of the latter took place.<sup>48</sup>

Banking regulations provided and implicit State guarantee on deposits in Uruguay and an explicit State guarantee in Argentina.<sup>49</sup> In Uruguay there were also no "minimum" rules controlling bank solvency as regards entry conditions, credit limits, provisioning, and bank information for depositors.<sup>50</sup> In Argentina the banking law of 1977 set out very general norms on solvency and liquidity, referring mainly to credit limits, constitution of guarantees, restrictions on fixed assets, relations between active and passive funds, and minimum capital requirements. However, it was not until 1985-90, after the financial crisis had surfaced, that rules on related credit

---

<sup>47</sup> V. Corbo, J. de Melo and J. Tybout, "What Went Wrong with the Recent Reforms in the Southern Cone", Washington D.C., World Bank, 1985, Report DRD 128.

<sup>48</sup> Ibid.

<sup>49</sup> A full State guarantee on deposits was reintroduced in Argentina in 1973. The guarantee on deposits of firms became negotiable with the Central Bank in 1977. However, all deposits in banks which had undergone intervention up to the beginning of 1982 were paid. The implicit State guarantee on deposits in Uruguay stemmed mainly from full payment of deposits during the financial crisis of 1971.

<sup>50</sup> A. Banda, "Regulación Bancaria, Crisis Financiera y Políticas Consecuentes. El Caso Uruguayo", in G. Held and R. Szalachman eds., *Ahorro y Asignación de Recursos Financieros*, (Buenos Aires, GEL, 1990).



were tightened. Now loans had to be classified according to risk category, and stricter rules on provisions were implemented. Norms prevailing in the 1970s were considerably weakened by the virtual absence of bank supervision. While each bank had the chance of being inspected once every two years in 1976-77, this frequency dropped to once every six years in 1978-82.<sup>51</sup> Thus in both countries, as in Chile, financial deregulation took place under conditions of "uncontrolled" banking as regards solvency.

In Argentina private-sector bank credit grew in real terms at an average of 10 per cent a year in 1976-78 and 20 per cent a year in 1979-81, with a stagnant economy. In Uruguay private-sector bank credit expanded at average yearly rates of 20 per cent in real terms in 1976-81 while GDP was growing at 3.5 per cent a year on the average. The sharp decline in the real exchange rate as of 1979, and the subsequent increases in the real rates of interest, which took place in both countries, soon eroded the profitability and solvency of import competing and export sectors. Loan rollovers and interest capitalization became an increasingly larger component of bank credit, as did speculative loans channelled at the time into profitable real estate and other non-tradeable activities.

The financial crisis exploded in Argentina in March 1980 with intervention in three fast-growing commercial banks, including the largest deposit holding bank. An impending balance-of-payment crisis (fueled by large-scale capital flight) and the abandonment of the nominal rate of exchange as a stabilization device in the second quarter of 1981 exacerbated the financial crisis. An immediate increase of 60 per cent in the real exchange rate and an accumulated GDP drop of 11 per cent 1981-82 caused severe solvency problems for debtors located in non-tradeable activities and in the economy at large. In December 1988, the Central Bank of Argentina was still liquidating 206 financial institutions, of which 84 had undergone intervention before the end of 1982.<sup>52</sup>

<sup>51</sup> E. Salama, "Regulación y Supervisión de la Banca e Instituciones Financieras en Argentina", in G. Held and R. Szalachman eds., *Regulación y Supervisión de la Banca. Experiencias en América Latina y el Caribe*, (Santiago, ECLAC/UNDP, 1991).

<sup>52</sup> L. A. Giorgo, "Crisis Financieras, Reestructuración Bancaria e Hiperinflación en Argentina", (México, CEMLA, August 1991, working paper.

Bank solvency problems had also surfaced in Uruguay in 1980-81. They developed into a financial crisis in 1982, when the Latin American debt crises, capital flight, and a large public-sector deficit forced a drastic balance of payment adjustment. GDP dropped 11 per cent in 1982 and another 6 per cent in 1983-84. Banks attempted to protect themselves from the foreign-exchange risk by denominating loans in dollars, only to find that credit risk had become unmanageable once the nominal real rate of exchange was abandoned as an anchor of stabilization in November 1982. Floating led to a 100 per cent rise of that rate in a few days. In 1982-85, severe solvency problems of banks and debtors led to large-scale domestic debt refinancing and to the purchase of bad-debt portfolios of smaller banking institutions by the Central Bank. A group of private banks, including the three largest commercial banks, which had shown growing solvency problems since the beginning of the 1980s, underwent intervention in 1985.<sup>53</sup>

The solvency problems faced by the banking systems of Colombia, El Salvador and the Dominican Republic at the end of the periods mentioned in Table 5, took place in different macroeconomic conditions and financial policies. But in every case, they are mainly the result of shortcomings in prudential regulation and/or supervision.

Annual inflation in Colombia during the second half of the 1970s stabilized in the 20-25 per cent range, with average GDP growth rate of around 5 per cent a year. A conservative foreign debt policy also protected Colombia from the Latin American debt crisis in 1982. The latter contributed to a recession, although GDP still grew 1 per cent in that year.

In the 1970s private-sector bank credit in Colombia expanded in keeping with GDP. However, the country experienced a "bubble" in 1980-81 when bank credit grew 41 per cent in real terms over the two years. The large-scale banking intervention initiated in 1982 demonstrated that the credit bubble consisted mainly of high-risk "related" loans to economic and financial groups, including the use of bank credit to buy up common stock of firms in the real sector. Unsafe loan practices had overstepped established credit norms and limits. At the same time, Supervisory authorities had failed to verify the quality of bank loan portfolios. After the interven-

---

<sup>53</sup> A Banda, *op. cit.*

tion, there were eight "official" banks, administered by the public sector, as compared to three in 1982, and nine private banks as compared to sixteen in 1982. By 1989, the former accounted for 70 per cent of the assets of the banking system.<sup>54</sup>

The commercial banking system of El Salvador had accumulated losses equivalent to 3.4 times its capital at the end of 1989. Overdue and refinanced loans representing 39 per cent and 26 per cent of the loan portfolio signalled further outstanding losses. Three factors are particularly noteworthy when seeking to explain the financial crises amidst a stagnant economic activity and the severe political turbulence of the 1980s: public-sector interference in the credit process, financial repression and shortcomings in the regulation and supervision of banks.<sup>55</sup>

The nationalization of commercial banks in March 1980 and a large Central Government deficit (equivalent to 15 per cent of CDP in the mid-1980s) facilitated financial repression and made bank credit prone to political influence and sectoral pressure groups. The Central Bank set both deposit and lending rates of interest, and banks had to meet a reserve requirement of 20 per cent on deposits while investing 10 per cent of their asset portfolios in low-yield public-sector financial instruments. In the 1980s, yearly inflation rates averaging 20 per cent led to negative real deposit interest of 6 per cent a year on average. While deposits stagnated, bank credit dropped by 35 per cent in real terms between 1980-81 and 1988-89.

Public-sector and Central Bank authorities took on an increasing role in the management of banks and the allocation of credit through appointment of personnel and credit directives. Under such conditions, the bulk of bank regulation and supervision fell to financial norms and their compliance. Prudential regulation and supervision were sidestepped. Individual credit limits were bypassed, credit risks inadequately assessed, provisions on risk-prone loans delayed, bad loans rolled over and overdue loans not collected. Since deposits enjoyed an implicit State guarantee after the nationalization of banks, financial repression in El Salvador took place in a

---

<sup>54</sup> L. A. Zuleta, "Estructura del Proyecto de Crédito para Inversión en Colombia", in C. Massad and G. Held eds., *Sistema Financiero y Asignación de Recursos. Experiencias Latinoamericanas y del Caribe*, (Buenos Aires, GEL, 1990).

<sup>55</sup> J. A. Belloso, "Regulación y Supervisión de la Banca en El Salvador" (Santiago ECLAC/UNDP, 1992), working paper.

climate of "uncontrolled" banking as regards solvency. Thus, once overdue loans had to be recorded, their share of the loan portfolio increased from 14 per cent in 1988 to 39 per cent in 1989.<sup>56</sup>

Financial "repression" became important in the Dominican Republic in the 1980s. The Central Bank maintained financial regulations that set nominal interest rates, sectoral credit limits, and credit-linked reserve requirements, while inflation rates increased until reaching 100 per cent a year in 1980. Frequent negative real deposit rates of interest in the banking sector led to a decline in private-sector bank funding.<sup>57</sup> Banks "own credits" diminished around 7 per cent in real terms in the decade (while GDP increased by around 20 per cent).

Financial repression plus a lax prudential regulation and supervision fostered a flourishing free financial sector. The latter was made up of financial establishments, financial groups, real-estate financiers, leasing firms, credit-card firms and other agents. The number of these agents increased from around 300 in 1979 to 650 in 1987, at which time their financial activities involved a quarter of the credit and a third of the deposits in the regulated banking sector.

In 1983 the Central Bank tightened limits on related credit and set out provisioning norms taking into account overdue loans and guarantees. In an attempt to counter the high credit risks which non-regulated financial agents were assuming in 1987 the Central Bank instituted credit limits, reserve and minimum capital requirements. However, even regulated banks have fallen far short of complying with credit limits and reserve requirements. Nor do available procedures and the capacity of Supervisory authorities allow for evaluating credit risks and establishing the solvency position of banks and financial institutions. The shortcomings of prudential regulation and supervision at the end of the 1980s were singled out as the main problem facing public-sector financial authorities in the current drive to modernize the financial system of the Dominican Republic.<sup>58</sup>

---

<sup>56</sup> J. A. Belloso, *op. cit.*

<sup>57</sup> A. Veloz, "Sistema Financiero Dominicano y Asignación Selectiva del Crédito", en C. Massad and G. Held eds., *Sistema Financiero y Asignación de Recursos*, (Buenos Aires, GEL, 1990).

<sup>58</sup> H. Guillian and J. Aristy, "Regulación y Supervisión del Sistema Financiero en la República Dominicana" in G. Held and R. Szalachman eds., *Regulación y Supervisión de la Banca. Experiencias de América Latina y el Caribe*, (Santiago, ECLAC/UNDP, 1991).

A financial crisis exploded in 1989, when dozens of previously non-regulated financial agents failed and when some banks in the regulated sector also became insolvent. Yet interest rates (and the exchange rate) were liberalized at the beginning of 1991, as part of a stabilization policy, under conditions of undetermined bank solvency and very weak prudential regulation and supervision. Real lending rates of interest among commercial banks immediately jumped to an equivalent of 50 per cent a year, but then declined as inflation dropped from 100 per cent in 1980 to around 5 per cent a year in 1991-92. Central Bank interest rates pointed to real annualized lending rates above 25 per cent a year at the end of 1991 and above 20 per cent a year at the end of 1992.<sup>59</sup> These rates have raised doubts as to the solvency of certain banks and financial agents.

Costa Rica stands for noteworthy macroeconomic and financial policies in the eighties, but also for varying solvency results depending upon prudential regulation and supervision. It adopted stabilization and structural reforms in 1983, in the aftermath of a severe macroeconomic crisis at the beginning of the 1980s and its foreign-debt moratorium in 1981 (one year before that of Mexico). Financial reform led to an expansion of private-sector banking, liberalization and devolution of credit decisions to banks,<sup>60</sup> and positive real rates of interest and their gradual deregulation.<sup>61</sup> At the same time, prudential regulation and supervision were strengthened on the basis of a uniform classification of the loan portfolio of banks according to risk categories, stricter rules on risk provisioning,<sup>62</sup> and a set

<sup>59</sup> Banco Central de la República Dominicana, *Boletín Mensual*, Santo Domingo, October-December 1991 and 1992, Annex.

<sup>60</sup> The Central Bank reintroduced some sectoral credit limits in favor of primary and export sectors along the way.

<sup>61</sup> Interest rates were deregulated in three stages. In the first two, the interest-rate structure pivoted around a "basic" interest rate set by the Central Bank. In the first stage, interest-rate dispersion was reduced and the interest-rate structure became flexible through movements of the basic rate. In the second stage, commercial banks could set their deposit rates freely within limits, while the interest spread (and thus their lending rates) were set in relation to their deposit rates. In the last stage, commercial banks were free to negotiate their deposit and lending rates of interest, with the exception of subsidized credit lines in favour of small-scale producers. See F. de Paula, "Costa Rica: Intermediación Financiera y Asignación de Recursos", in C. Massad and G. Held eds., *Sistema Financiero y Asignación de Recursos*, (Buenos Aires, GEL, 1990).

<sup>62</sup> Full-risk provisioning was a goal to be achieved in the forthcoming years.

of bank-performance indicators of which depositors and the public were to be informed. Financial reform also opened the door to "free" financial establishments which soon started to grow in number, operating at high real rates of interest in the more risk-prone segments of the credit market.

The results of stabilization and adjustment policies were encouraging. GDP grew on an average of 4.3 per cent a year in 1983-87 while annual inflation dropped from 33 per cent in 1983 to an average of 15 per cent in 1984-87. At the end of 1987 a tightening of monetary policy led to liquidity shortages and to the breakdown of all (non-regulated) financial establishments. However, no supervised bank became insolvent in this financial debacle.<sup>63</sup>

The financial liberalization experiences of Bolivia and Peru typify the extent to which solvency problems are brought out into the open by macroeconomic upheavals. However, macroeconomic conditions and policies have also overshadowed the shortcomings of prudential regulation and supervision.

In August 1985, the government of Bolivia adopted a radical stabilization policy and structural reforms aimed at an open market economy. The reduction of the fiscal deficit from 25 per cent of GDP in 1984 to 2.5 per cent in 1986<sup>64</sup> was decisive in controlling hyperinflation. Inflation fell from 8,200 per cent in 1985 to 11 per cent in 1986 and has since remained in the 10-20 per cent range. Trade reform reduced tariff barriers from an average of 40 per cent in 1985 to 10 per cent in 1990.<sup>65</sup>

As part of the new policy régime, prices, interest rates, the rate of exchange<sup>66</sup> and bank credit were liberalized in August 1985. Prevailing uncertainty as to the behaviour of prices led first to an unprecedented real interest rate jump and then to a decline in interest rates as inflation drop-

<sup>63</sup> R. Díaz "Regulación y Supervisión de la Solvencia Bancaria en Costa Rica", in G. Held and R. Szalachman eds. *Regulación y Supervisión de la Banca. Experiencias en América Latina y el Caribe*, (Santiago, Chile, ECLAC/UNDP, 1991).

<sup>64</sup> A tax reform was introduced in 1986 to increase fiscal revenue.

<sup>65</sup> J.A. Morales et. al., *Bolivia: Ajuste Estructural. Equidad y Crecimiento* (La Paz, Baremo, 1991), Introducción.

<sup>66</sup> The rate of exchange was liberalized through auctions of foreign exchange by the Central Bank.

ped. The real lending interest rates of banks went from around minus 80 per cent a year in 1984 (when interest rates were still set by the Central Bank) to nearly 100 per cent in 1985, 70 per cent in 1986, 40 per cent in 1987 and an average of 20 per cent in 1989-91. Though real lending rates of interest have fallen, they have none the less remained at high levels.

Solvency problems led to the closure of four banks in 1987. The very high real interest rates and the changes in relative prices and sectoral profitabilities brought about by rapid disinflation and the trade reform loom large in this situation. Inadequate norms controlling credit risk, an implicit State guarantee on deposits, and weak supervision also played a role. Since 1987, a number of measures have been taken to limit credit concentration and related credit, increase provisions on risky credit, and shore up supervision. Yet, overdue loans still stood at 14 per cent of the loan portfolio of banks in 1989.<sup>67</sup> The prevailing high real lending rates of interest may thus partly reflect remaining high credit risks in bank portfolios.

A handful of bank insolvencies in the first half of the 1980s alerted public-sector financial authorities in Peru as to defective norms controlling solvency and the risks stemming from an implicit State guarantee on deposits. Accordingly, a number of measures considerably improved prudential regulation in the second half of the 1980s. Credit classification to risk categories and stricter limits on individual and related loans became official in 1989. The new banking law of 1991 expanded capital requirements, introduced the sharing of information on debtors among banks, required banks to provide the public with information regarding the quality of their portfolios and capital positions, and empowered Supervisory authorities to levy clearly defined sanctions. At the same time, the banking law of 1991 set up an explicit and compulsory deposit insurance fund. The fund guarantees bank deposits up to US\$ 3,500 (at the rate of exchange prevailing in 1991) against a premium payable by banks. The latter are to be differentiated according to the risk of their portfolios.<sup>68</sup>

<sup>67</sup> G. Afcha de la Parra, "Desintermediación y Liberalización Financiera en Bolivia: 1980-88", in G. Held and R. Szalachman eds., *Ahorro y Asignación de Recursos Financieros*, (Buenos Aires, GEL, 1990).

<sup>68</sup> G. González Arrieta, "Regulación y Supervisión de la Solvencia del Sistema Financiero en el

The Peruvian economy moved towards hyperinflation and severe macroeconomic imbalances in the second half of the 1980s. Inflation reached 2,800 per cent in 1989 while GDP fell 21 per cent in 1988-89. In August 1990 the government implemented a drastic stabilization policy and started structural reforms directed towards an open market economy as Bolivia had done in 1985. As part of the new policy regime, prices, interest rates, the rate of exchange and private sector bank credit were quickly liberalized. Inflation peaked at 7,600 per cent in 1990 while GDP dropped another 5 per cent. Since then, disinflation made less progress, the interest jump has been higher, and the decline in interest rates has been slower as compared to the Bolivian experience. In the first halves of 1991, 92 and 93 the yearly inflation rates were 200 percent, 65 percent and 55 percent, while the real annualized lending rates stood at around 170 per cent, 50 per cent and 35 per cent.<sup>69</sup>

The above macroeconomic conditions were bound to create solvency problems for banks and debtors. In March of 1993 overdue loans of domestic commercial banks were a 22 percent of their loan portfolios. However provisions for risky loans stood at only 12 percent pointing also to defective norms on provisioning and on a timely recapitalization of banks, in view of the severe erosion of their capital bases. A weakened supervision may have contributed to this outcome on account of the loss of qualified professional staff stemming from the drastic adjustment of public sector expenditure.

## **2. Defective bank regulation and supervision as a factor of financial instability**

Severe shortcomings in prudential regulation and supervision are a common feature of all banking crises mentioned in Table 5. Faults regarding solvency controls on risks, provisions, public information on banks, and supervision, together with a implicit or explicit State guarantee on depo-

---

Perú", en G. Held and R. Szalachman eds., *Regulación y Supervisión de la Banca. Experiencias de América Latina y el Caribe*, (Santiago, ECLAC/UNDP, 1992).

<sup>69</sup> On loans in domestic currency due in less than a year. See: Banco Central de Reservas del Perú, "Tasas de Interés Activas y Pasivas de la Banca Comercial" (Lima, May 1993).



sits, placed virtually all macroeconomic and financial policies in a context of "uncontrolled" banking as regards solvency.

The banking crisis in Colombia at the beginning of the 1980s illustrates how uncontrolled banking alone can create high credit risks and unsustainable capital losses even under quite stable macroeconomic conditions.

The liberalization of bank credit, interest rates and other financial variables in Argentina, Chile and Uruguay in the 1970s were all carried out under very unfavourable conditions for the stability and efficiency of the banking system. Uncontrolled banking together with unstable macroeconomic conditions and policy inconsistencies led to greatly unbalanced exchange and interest rates and to relative price and profit shifts among economic activities. Although it is difficult to rank the importance of these factors in explaining the banking crises which exploded in the three Southern Cone countries at the beginning of the 1980s, the severe shortcomings in prudential regulation and supervision count for a great deal in all of them. It is significant that in Argentina and Chile, and partly in Uruguay, solvency problems erupted before balance-of-payments and foreign-debt crises led to the need for major macroeconomic adjustments.

In the mid-1980s, Bolivia liberalized interest rates, bank credit, and other financial variables in light of macroeconomic turbulence and uncontrolled banking. Peru took the same steps in 1990, in conditions of soft risk provisioning and recapitalization norms. The magnitude of the stabilization and adjustment effort, together with very high real rates of interest in the commercial banking sector, appear to be the leading causes of the solvency problems which have surfaced so far. However, high real lending rates of interest also signal high credit risks in the loan portfolios of banks and shortcomings in provisions and in the write-off of bad loans from their asset portfolios.

Defective prudential regulation and supervision have also created solvency problems under conditions of financial repression, such as in El Salvador and the Dominican Republic in the 1980s. The same holds true in the case of "free" financial institutions in Costa Rica and in the Dominican Republic in the second half of the 1980s.

Of all the countries mentioned in Table 5, Costa Rica is the only one where the liberalization of bank credit and the (gradual) liberalization of

interest rates in the 1980s did not cause financial problems in the regulated banking system. It is also the only case where prudential regulation and supervision had been substantially improved.

#### IV. CONCLUSIONS

- A. Prudential regulation and supervision have played an outstanding role in determining the solvency (and efficiency) of banks and financial institutions undergoing various financial experiences in Latin American and Caribbean countries during the last two decades. Severe shortcomings in prudential regulation and/or supervision, as exemplified by the arrangement of uncontrolled banking, has caused or fueled banking crises and financial instability during times of financial liberalization, financial repression and free financial activities.
- B. The outcome of the liberalization of interest rates, credit and other financial variables, as regards rendering banks solvent and efficient while fostering an efficient allocation of resources, depends on the fulfillment of a number of conditions. Among these, the following stand out in Latin American and Caribbean countries:
1. A sufficiently stabilized macroeconomy based on a strong financial position of the public sector and a real exchange rate and real rates of interest in line with medium and longer term economic conditions.
  2. Prudential regulation and supervision capable of limiting and controlling credit risks, foreign-exchange and other risks which banks and economic agents have to face in freer or more liberalized credit, foreign exchange and other markets.<sup>70</sup>
  3. An "industrial" banking organization whereby banks can engage in multiple financial services with a view toward competitiveness; taking advantage of economies stemming from complementarities among financial services, the scale of operation and other factors;

---

<sup>70</sup> It is also important to make sure that banks are solvent at the outset of financial liberalization.

and achieving financial "deepening" as the volume of funds increases (through financial instruments extending the period of transactions and spreading and transforming risks).

While the financial liberalization approach has stressed the first of the above conditions, it has certainly overlooked the meaning of prudential regulation and supervision.

- C. The liberalization of bank credit and of interest rates under conditions of severe shortcomings in prudential regulation and/or supervision and of a high macroeconomic instability can easily end up adding risk to loan portfolios and creating unduly high real lending rates of interest, frequently in the form of a credit "bubble". These were common features of financial liberalization in the Southern-Cone countries in the 1970s. However, later experiences have also shown financial liberalization not to be accompanied by prudential regulation, stronger bank supervision, and sufficiently stabilized macroeconomic environments. Moreover, the often prevailing arrangement of "uncontrolled" banking as regards solvency has by itself been conducive to financial instability.
- D. High real lending rates of interest have been a common feature of most financial liberalization experiences in Latin American and Caribbean countries during the last two decades. While a number of factors may contribute to these rates, one stands out in relation to insolvency: extremely high real "accrued" lending rates which are not paid by debtors but are instead rolled over, thus giving rise to a very rapid increase in the volume of credit and adding to its riskiness.
- E. Many of the countries mentioned in Table 5 have in the meantime taken measures to strengthen prudential regulation and supervision of their banking systems and to expand the scope of their activities to include multibanking. However, prudential regulation measures have generally not included freely informing depositors and the public with regard to credit and asset risk and the effective capital positions of banks (as Chile did in 1986). They have thus opted for

banking controlled by the public sector (see Table 2), though some countries have explicitly limited the guarantee or insurance on deposits.

- F. Unstable macroeconomic conditions and defective prudential regulation and supervision do not provide a testing ground for financial liberalization in most of the financial liberalization experiences of Latin American countries during the last two decades. However, improved prudential regulation and supervision, along with more stable macroeconomic conditions in a number of countries of the region, may do so in the 1990s. Among the countries mentioned in Table 5, Chile has advanced the most as regards financial liberalization of credit and capital markets emphasizing prudential regulation and supervision. The financial and real sector results which have been achieved since the mid-1980s deserve close attention.

## ANNEX

### Decomposition of credit growth in 1978-80 in the financial liberalization experience of Chile

An important argument can be derived from the performance of The State Bank when simulating a decomposition of the 39 per cent yearly growth of the loan and financial asset portfolio of the Chilean banking system in 1978-80. The share of the State Bank in the banking-system loan portfolio stood at a substantial 20 per cent in 1978, its loans grew at a yearly rate of 22 per cent in real terms in 1978-80, and it did not have to sell bad loans to the Central Bank.<sup>a</sup> Its rate of growth can therefore be taken as representative of the growth rate of normal risk or "legitimate" credit in the banking system. Under this assumption, the latter would have expanded at around three times the GDP growth rate, while "false" or very high risk credit would have grown twice as fast as GDP, or at 17 per cent in real terms annually.

The rate of growth or "false" credit can be broken down making use of the fact that the real lending rates of interest shown in the second and third column of table 3 fell to around a half, once the accumulated stock of bad loans had been sold to the Central Bank and risk-prone loans reprogrammed. Since solvency norms as of 1987 required that interest accruals also meant cash income, nearly half of accrued interest on loans in 1970-80 may have been capitalized, that is,  $(1 - a)r = 0.5 \times 19.6 = 10\%$ . The remainder of high-risk loan growth would stand for the yearly growth of new "false" credit ( $f_1 = 7\%$ ). Thus:

$$p = 1 + f_1 + (1 - a)r = 22\% + 7\% + 10\% = 39\% \quad (1a)$$

<sup>a</sup> The State Bank was not authorized to sell bad loans, but it did not require Central Bank assistance to overcome its loan-portfolio problems.

The corresponding growth rate of deposits and other liabilities which finances the growth of the loan and financial asset portfolio is<sup>b</sup>:

$$d = 1/e (i + 1 + f_1 + g - a.r) \quad (2)$$

where "a.r" stands for the proportion of interest accruals on loans paid in cash and where non previously mentioned symbols mean:

e = average ratio of reserve requirements on deposit and other liabilities.

i = Average real rate of interest on deposits and liabilities.

g = Administration and other current cash expenses as a percentage of the loan (and financial assets) portfolio.

Filling in the variables of this equation with 1978-80 data on the banking systems yields a rate of growth similar to that of the loan and financial asset portfolio of the banking system:

$$d = 1/0.98 (13\% + 22\% + 7\% + 6\% - 0.5 \times 19.6\%) = 39\% \quad (2a)$$

<sup>b</sup> A simple bank model is assumed where loans and financial assets are equal to deposits and liabilities. See G. Held and R. Szalachman, *Regulación y Supervisión de la Banca en la Experiencia de Liberalización Financiera en Chile (1974-1988)*, (Santiago, ECLAC, 1989), Annex B.

## NOTE ON THE AUTHORS

- Alice H. Amsden** Leo Model Professor of Economics, New School for Social Research, New York.
- Yilmaz Akyüz** Chief, Macroeconomic Section, Global Interdependence Division, UNCTAD, Geneva.
- Donald Hanna** Senior Economist, World Bank, Resident Staff, Jakarta, Indonesia.
- Günther Held** Coordinator, Regional Joint Project ECLAC/UNDP "Financial Policies for Development", ECLAC, Santiago, Chile.
- Machiko Nissanke** Senior Researcher, Overseas Development Institute, London; School of Oriental and African Studies, University of London.
- Andras Uthoff** Regional Adviser on Monetary and Financial Policy, ECLAC, Santiago, Chile.

