Edited by
José M. Fanelli and Rohinton Medhora

FINANCIAL REFORM IN DEVELOPING COUNTRIES

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Financial Reform in Developing Countries

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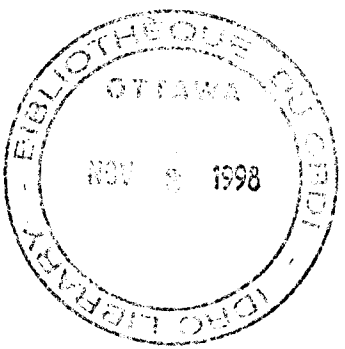

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Printed and bound in Great Britain by Antony Rowe Ltd, Chippenham, Wiltshire

To my wife

José M. Fanelli

To my parents

Rohinton Medhora

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Foreword

Liberalizing or 'depressing' the financial sector has been at the forefront of the economic policy debate in developing and transition economies ever since Ronald McKinnon and Edward Shaw published influential tracts advocating the operation almost a quarter a century ago. To a greater or lesser extent, their policy recommendation has been adopted world-wide. This book comes at the right time with a good question – what has liberalization wrought?

The answers turn out to be as complex as the concept itself. Derepression has many interpretations. The simplest is that competition in the financial sector should be encouraged, while at least glaring market failures should be dealt with by regulatory interventions. The case-studies herein show that these mundane goals have often not been attained; at times (witness the chapter on Nigeria) the shortfalls have been Rabelaisian.

A more sophisticated version centres around the creation of markets, financial instruments, and/or market actors that were previously 'missing'. Establishment of a market for Treasury Bills is one example; founding a stock exchange is another. The country studies show how such steps have been taken in several countries (India, Malaysia, etc.), typically with most success when new markets or instruments were introduced gradually.

Presumably, enhanced instruments and markets should help the financial sector provide cheaper loan rates to a wider range of borrowers and/or higher returns to a growing pool of savers. The evidence regarding such outcomes is not clear. In the recent period, very large productive enterprises in developing countries appear to have relied more on external finance for their capital formation than do their counterparts in industrialized economies (where in flows-of-funds data business investment and retained earnings track closely together). Whether lower capital costs through bond and equity issues were thus attained, and whether small firms got similar access to external money, are questions that remain to be explored.

Deeper financial markets are also supposed to be less 'fragile' or more 'robust'. Have such improvements resulted from liberalization exercises over the past twenty-odd years? A general answer is impossible to provide. On the positive side, patient creation of T-bill markets does

permit more flexible monetary policy and provides a 'riskless' anchor for the complex of asset returns and prices. But nurturing markets is one thing, while rapid derepression of existing systems is quite another. The consequences of the latter sort of move can be devastating.

Horror shows caused by the acts of free market policy zealots began in Latin America's Southern Cone in the late 1970s, and continued through Turkey and Mexico in the 1990s to pyramid schemes in the transition economies almost to the present (Albania is just pulling back from a near-civil war caused by the collapse of a pyramid as this is being written). In such circumstances, even greater financial 'depth' as signalled by increasing rations of outstanding financial assets to GDP can be misleading. Kuwait's ratio went from 0.98 in 1979 to 2.14 in 1982 (compared with values of 1.2 to 1.5 typical of industrialized economies) – just before its booming stock market crashed. The previously 'missing' financial instruments involved were post-dated checks that could be transacted in advance.

Assuming that in the future such catastrophes can be avoided, the bottom line on liberalization is that in relatively poor nations in which there is a political consensus favouring economic growth, the social task of finance is to ease the burden of capital formation. Stably growing supplies of reasonably priced credit are essential to this end. Present-day orthodoxy (stemming directly from Shaw and McKinnon) suggests that a relatively unregulated, private-enterprise-driven financial system is the best means.

The great strength of the present volume, in both its country studies and analytical chapters, is to show that this world view is simplistic. A country's financial history and existing institutions tightly constrain its possibilities for change. Several authors herein suggest that 'full' liberalization might fit best only after what Simon Kuznets called 'modern economic growth' is in full swing; along the way, an intelligent degree of repression makes good sense. Just how much repression and how it should be applied is difficult to say outside a specific country's own context. The work that the editors and authors have done for this volume provides the empirical and theoretical background needed to make the answer a little bit easier to come by.

LANCE TAYLOR

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Preface

This book contains the results of a research project initiated and supported by Canada's International Development Research Centre and managed by CEDES (Centro de Estudios de Estado y Sociedad) in Buenos Aires, Argentina, under the direction of José María Fanelli.

During the formative period of this project in 1994, it was evident that while financial sector performance and reform in developing countries has received much attention, particularly in the aftermath of the Southern Cone experience of the 1970s, significant aspects of the issue remain cloudy, or are taken on faith by key players. On the basis of discussions with several persons involved in the research and application of financial reforms, two IDRC staff members produced a background paper[1] that formed the basis for the ambit of the research and creation of the project team. From the general framework provided by this paper and discussions during the project planning meeting held at IDRC in Ottawa in September 1994, we chose to highlight three areas of enquiry.

First, while it is clear in generic terms that initial conditions and the general economic environment within which financial reform occurs matter, we were interested in the institutional and enabling environment within which financial reform occurs in developing countries, particularly its role in determining the short-run and long-run outcomes that are subsequently observed.

Second, and related to the first, we singled out the role of the central bank during financial reform. Clearly, central banks – almost everywhere – are the key players in this process. However, their role differs across countries, and is often poorly understood among researchers and policy-makers alike. This is a particularly important issue, because when it comes to financial reform, central banks straddle the micro–macro divide. Their 'macro' duties include being responsible for all aspects of domestic monetary policy and external payments. Their 'micro' duties are more varied, but often include regulating and overseeing the financial sector and designing its reform.

This second point also gave us an entry into the third area of concern to us, that of the role of finance in understanding the process of financial reform. Perhaps more a reflection on the profession than the subject, it was evident to us that there were different 'sets' of literature and – therefore – different levels of understanding of financial reform among and

within research economists and practitioners in the field. At the very least, perspectives from finance offered interesting counter-points to macroeconomic approaches, and in the latter we could distinguish a 'development' literature from an 'OECD' one.

Therefore, given IDRC's traditional emphasis on capacity building in and policy-relevant research on developing countries, we sensed a useful opportunity to bring several 'types' of researchers and practitioners together to work on the subject. (Despite our perception that nuances are important, particularly within the sub-disciplines of the economics and policy communities working on this topic, we decided not to let semantics burden us any more than they should, and throughout this volume we use the phrases 'financial reform' and 'financial liberalization' interchangeably.)

The five country case-studies allow for a detailed examination of the experience with financial liberalization in each country and at the same time permit comparability of results across countries. Although the researchers in each country followed a common work plan, these countries were selected because they represent a variety of experience with and position on the continuum of the financial liberalization process.

Argentina, Turkey and Uruguay may be considered to be advanced in the financial reform process, albeit at different stages and under different macroeconomic and institutional conditions. Argentina's Southern Cone experiences and credentials are impeccable, though its Convertibility Plan sets it apart from its neighbours and, for that matter, most reforming countries. Uruguay's relatively long experience with financial reform was intertwined with its desire to be a regional financial centre, a mixed blessing in the eyes of our authors and one that is in their view more a chance development than a conscious policy. While not having received the same attention as the Southern Cone countries, Turkey has had an equally long experience with liberalization and has a relatively open capital account regime – at least open enough to have been the subject of considerable instability that, while sourced in foreign capital inflows, is as much the result of inappropriate domestic policies and institutional arrangements as it is of 'hot' money.

India and Nigeria are beginners in this process. This may have allowed them – especially India – to avoid some of the worst excesses of the experience of the early reformers, though their low per capita incomes also give them less room to manoeuvre, especially when it comes to ensuring the welfare of consumers (read depositors and investors.) Nigeria's discontinuous record of reforms lays bare the importance of their credibility and consistency. Still, reform is entrenched and mostly irreversible in each country, so that there are an experience and a process that can be and are examined.

We might add that our choice of countries was made easier by the existence of strong researchers and research centres in each – an important consideration, given our aim to promote indigenous research and capacity-building rather than a 'fly in, fly out' mode of policy analysis.

Several issues crosscut the topics covered by the country case-studies, and these are dealt with by the authors of the thematic chapters. We took advantage of our contacts during the formative stage of this project with James Powell of the Bank of Canada to bring a developed country perspective to our work. As he argues in his chapter, there are some interesting and pertinent aspects of Canada's experience with financial sector reform for many developing countries. Salient among these for our purposes are the separation of the independent central bank from the operations of the agency responsible for financial sector regulation, and the wide-ranging (that is, micro and macro) sectoral reforms that form the Canadian experience.

The Mexican débâcle that occurred during the life of this project convinced us that not only could 'success' in reforming an economy often be illusory (or poorly understood by important players involved in their design), but also the effects of a calamity in one portion of the globalized financial sector could easily be transmitted elsewhere. Guillermo Calvo examines this important aspect of financial liberalization at the supra-national level.

Among the several approaches that have been taken world-wide to financial reform, a basic distinction may be made between the 'big bang' approach and the 'go slow' approach. Indonesia and Malaysia represent well these respectively, and Anwar Nasution provides useful insights into the causes and consequences of each country's chosen path, thus drawing lessons for other countries that face similar choices.

Although we eschewed studying a specific experience from one of the economies in transition, certain characteristics are common to several. Rodney Schmidt identifies these, and focuses on the complex and important links between banks and firms in Eastern and Central Europe. This chapter, once again, highlights the importance of understanding the macro economy as well as sectoral and firm level issues if a proper assessment of the working of the financial sector is to be made, not just in this region but everywhere.

Finally, Varouj Aivazian puts a point to the several issues that underlie the work in this volume by bringing a more explicit theoretical and finance-related perspective to the analysis of financial reform in developing countries, thus serving as the second 'book-end' in this volume to our own introductory and overview first chapter.

As the process of financial reform continues and the process of integration of capital markets accelerates nationally and internationally, its study, especially if it is to have any practical value, must continue to be as multifaceted and agnostic as possible. This would be the time to mention that the views expressed in all the papers in this book are those of the authors alone, and not necessarily those of the institutions to which we all belong. More importantly, we trust that the depth and breadth of analysis presented in this volume fulfils, in some small measure, the task at hand.

JOSÉ M. FANELLI
ROHINTON MEDHORA

Note

1. 'The Process of Financial Liberalization in Developing Countries: Research Directions' by Gary McMahon and Rohinton Medhora, Ottawa: IDRC, 1994. Copies are available from Medhora at IDRC or any of the principal authors in this volume.

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This volume is a genuinely group effort and would not have been possible without the cooperation of a number of persons and organizations.

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Gerry Helleiner has been a source of inspiration and counsel for this project when it was merely a gleam in our eye.

We thank all participants of the project planning meeting, especially André Ryba and Nicholas Staines, held at IDRC in Ottawa in September 1994. The first methodological meeting of the project was hosted by Centro de Estudios de Estado y Sociedad (CEDES) in Buenos Aires, in May 1995. We thank in particular Mario Damill and Roberto Frenkel for their participation in this meeting, and CEDES for its management of the logistics. The mid-term meeting of this project was hosted by the Indira Gandhi Institute of Development Research (IGIDR), Mumbai, India, in February 1996. We thank IGIDR for its hospitality and Pradeep Agrawal, Raymond Gauthier, Veena Mishra, Praveen Mohanty, Kirit Parikh and A. Vasudevan for their participation in the meeting. The seminar disseminating the final results of this project was hosted by Bilkent University in Ankara in June 1996. The facilities were excellent, and we thank Nedim Alemdar, Ali Bilge, Korkut Boratav, Erol Cakmak, Ali Dogramaci, Hasan Ersel, Ahmet Ertuğrul, Guvan Sak, Faruk Selcuk, Andrés Solimano, Cem Somel and Osna Zaim for their participation.

Finally, thanks are due to Eshete Hailu at IDRC and Keith Povey and Mark Hendy for their work in bringing eleven chapters written by nineteen economists from all over the world into a coherent and readable whole.

List of Abbreviations

ABM	Agricultural Bank of Malaysia
BASE	Buenos Aires Stock Exchange
BCEAO	Banque Centrale des États de l'Afrique del l'Ouest
BFS	Board for Financial Supervision
BHN	National Mortgage Bank
BHU	Banco Hipotecario del Uruguay – Mortgage Bank of Uruguay
BICE	Foreign Trade Bank
BNB	Bank Negara Bills
BOFID	Banks and Other Financial Institutions Decree
BOP	balance of payments
BPPC	Badan Penyangga dan Pemasaran Cengkeh
BPR	Bank Perkreditan Rakyat
BROU	Banco de la República Oriental del Uruguay – Bank of the Eastern Republic of Uruguay
C$	Canadian Dollar
CAC	Corporate Affairs Commission
CAMEL	Capital Adequacy, Asset Quality, Management, Earnings and Liquidity
CAPM	capital asset pricing model
CAR	capital adequacy ratio
CB	central bank
CBC	central bank charter
CBM	central bank money
CBN	Central Bank of Nigeria
CDIC	Canadian Deposit Insurance Corporation
CEDES	Centro de Estudios de Estado y Sociedad
CFA	Commuauté Financière Africaine
CEE	Central and Eastern Europe
CINVE	Centro de Investigaciones Economicas
CNV	National Securities Commission
CONICET	National Research Council
CPI	consumer price index
CRR	cash reserve ratio
DBM	Development Bank of Malaysia
DFHI	Discount and Finance House of India
DFI	development finance institutions

DICGC	Deposit Insurance and Credit Guarantee Corporation
DIV	debt intermediation view
DMB	deposit money banks
DTC	deposit-taking cooperative
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
EPF	Employees' Provident Fund
FELDA	Federal Land Development Authority
FMF	Federal Ministry of Finance
FMBN	Federal Mortgage Bank of Nigeria
FSRCC	Financial Services Regulation Coordinating Committee
G-10	Group of Ten
IBRD	International Bank for Reconstruction and Development
ICICI	Industrial Credit and Investment Corporation of India
IDBI	Industrial Development Bank of India
IDBM	Industrial Development Bank of Malaysia Berhad
IDRC	International Development Research Centre
IFCI	Industrial Finance Corporation of India
IFE	Institución Financiera Externa – External Financial Institution
IGIDR	Indira Gandhi Institute of Development Research
IMF	International Monetary Fund
INE	Instituto Nacional de Estadística – National Statistics Bureau, Uruguay
IRBI	Industrial Reconstruction Bank of India
ISE	Istanbul Stock Exchange
ISI	Import Substituting Industrialization Policy
JSE	Jakarta Stock Exchange
KLSE	Kuala Lumpur Stock Exchange
LIBOR	London inter-bank offered rate
LIC	Life Insurance Corporation of India
LLR	lending limits regulations
LVTS	large value transfer system
MAL	Matrix of Assets and Liabilities
MARA	Council of Trust for Indigenous People
MAS	Malaysian Airlines
MCI	monetary conditions index
MERCOSUR	Mercado Común del Cono Sur – Southern Cone Common Market
MOF	Ministry of Finance
MSB	Malaysian Saving Bond

MSE	Mumbai Stock Exchange
NABARD	National Bank for Agriculture and Rural Development
NAFTA	North American Free Trade Agreement
NBCB	National Board for Community Banks
NBFI	Non-Bank Financial Institutions
NDIC	Nigerian Deposit Insurance Corporation
NEXIM	Nigerian Export Import Bank
NISB	National Insurance Supervisory Board
NOP	net open position
NPF	National Provident Fund
NSE	Nigerian Stock Exchange
NT	non-tradeables
OTB	Overseas Trust Bank
OECD	Organization for Economic Cooperation and Development
OFI	other financial institutions
OTCEI	Over the Counter Exchange of India
PPP	purchasing power parity
PSBR	public sector borrowing requirement
RAM	Rating Agency Malaysia Berhad
RBI	Reserve Bank of India
RCF	Reports on Currency and Finance
RISDA	Rubber Industry Smallholders' Development Authority
SAP	structural adjustment programme
SBI	Bank Indonesia Certificates
SBOI	State Bank of India
SBPU	Surat Berharga Pasar Uang
SEC	Securities and Exchange Commission
SES	Stock Exchange of Singapore
SFI	state financial institutions
SIDBI	Small Industries Development Bank of India
SLR	statutory liquidity ratio
SPO	State Planning Organisation
SRR	Statutory Reserve Requirement
SSE	Surabaya Stock Exchange
TAFI	total assets of all types of financial institutions
TMB	Telekom Malaysia Berhad
TNB	Tenaga Nasional Berhad
UNCTAD	United Nations Conference on Trade and Development
UR	Unidad Reajustable – Indexed Unit
UTI	Unit Trust of India
WV	wealth view

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Part I
Introduction

1 Financial Reform in Developing Countries: An Overview

José M. Fanelli and Rohinton Medhora

1.1 INTRODUCTION

For the large number of developing countries undergoing significant structural transformations, one of the most important and controversial adjustment areas is that of financial markets. Of the principal broad areas facing adjustment – which also include fiscal systems, labour markets, foreign trade regimes, investment incentives and the agricultural sector – the financial market may well be the most controversial and difficult market to transform. The consequences of poorly functioning or troubled financial sectors – on financial institutions, depositors, resource allocation and, ultimately, growth and development – are significant and well known. It is also now understood that financial liberalization is not an 'event', but rather a process. However, there is little consensus as to when to liberalize financial markets, or how it should be done. What emerges from the recent literature, including the chapters in this volume, is that financial liberalization should be one of the last stages of the economic reform process, as much a signal of successful reform and development in other parts of the economy as a cause of it.[1]

Nevertheless, even if theoretically desirable, the choice of the policymaker rarely comes down to either liberalizing or not liberalizing financial markets. Some financial liberalization is often forced upon any country that is trying to 'insert' itself in the global economy. Moreover, given the technological advances of recent decades and the trend toward globalization of markets, it has become increasingly difficult to isolate domestic financial markets from the outside. Therefore, at best, the decision often boils down to how far a country goes, how fast and in what sequence. Moreover, 'liberalization' of the financial sector, more than that of other sectors, does not have a purely 'classical' meaning of the withdrawal of the government from the functioning of a market. Rather, and typically, it involves a redefinition of the roles and responsibilities of the principal

institutions involved (such as the central bank, the finance ministry, the deposit insurance system, the other financial institutions and the stock exchanges); a re-regulatory rather than de-regulatory regime; and understanding on the part of policy-makers of the micro-level and institutional milieu within which financial change occurs; and an equal understanding on their part of the effects of this liberalization on the setting of macroeconomic policy, particularly monetary policy.

Yet, the international evidence regarding financial liberalization has not produced the results expected by theory. The most important (and disappointing) facts are: (1) although it is commonly observed that credit supply increases after liberalization, the results in terms of financial deepening are usually modest; (2) in many cases liberalization resulted in an open financial crisis a few years after it had been implemented; and (3) some interventionist countries (like Taiwan and Korea) achieved impressive levels of financial deepening without significant liberalization.

When one compares the Southern Cone experience with financial liberalization in the 1970s (disastrous by all accounts) with the East Asian experience with reform (until recently success blended with judicious financial repression) and efforts in sub-Saharan Africa (reform in the face of severe weakness in the enabling environment and economic structure), it is apparent that no unique recipe for success emerges. Broadly speaking, initial conditions matter – particularly the shape of the macroeconomy at the time of reform and the level of general development that prevails in a country. Finance matters – meaning the condition of the various financial markets and the range of choices and quality of intermediation available to asset buyers and sellers. The enabling environment matters – meaning the institutional and regulatory milieu within which all participants in the financial sector operate.

Following this introductory chapter, the rest of the book presents the chapters that resulted from this project. The aim of this chapter is to describe the characteristics of the research, to examine the most relevant aspects of the analytical framework used and to situate these in the larger literature on financial liberalization. Our findings are related not only to the theory and empirical evidence but also to applied policy issues.

1.2 UNDERSTANDING FINANCIAL LIBERALIZATION

The first obstacle in evaluating a liberalization experience is the difficulty in defining precisely 'financial liberalization'. It is not at all obvious what either a financial 'liberalization' or a 'liberalized' capital market means.

(Throughout this book the words liberalization and reform are used interchangeably.)

At first sight it might seem easy to define the ultimate result of liberalization: a 'liberalized' financial system is one free from financial repression. Hence, it could be said that eliminating financial repression is what liberalization is all about. However, there is a grey zone. As the chapters in this book clearly show, this zone exists because there is no financial market structure free from interventions. There is always some degree of government intervention owing to the existence of market failures (related to certain market structures, externalities, uncertainty and informational problems). Consequently, it is necessary to determine which regulations are market 'friendly' and therefore should not be considered instances of financial repression.

The ambiguity of the literature on these points often results, as the experiences analysed in this book show, in the incorrect design of the policy packages which, in turn, give rise to severe policy dilemmas and even financial crisis. For example, although there is consensus on the importance of bank supervision in the literature, there is no systematic treatment of the way in which supervision should be adapted to specific country contexts. One point made by the authors of the studies of Argentina, Nigeria and Turkey is that these countries suffered acute financial distress even though the central bank had implemented or was in the process of implementing the Basle standards on bank capital requirements. Another point is that there are no well-defined and clear boundaries for the role of lender of last resort of the central bank and for the guarantee on deposits. The country studies show that there is a significant and difficult trade-off between the need to limit systemic risk and the need to restrict moral hazard in banking. In Argentina, to avoid moral hazard, the government almost eliminated the lender of-last-resort activity of the central bank, and there was no guarantee on deposits. However, the sudden increase in financial fragility after the Mexican devaluation in 1994 obliged the authorities to step in and provide liquidity to the banks and a limited guarantee to depositors. These actions were highly successful in circumventing the deepening of an incipient financial crisis in early 1995.

Nevertheless, although it is important for determining policy goals, an exact definition of what a free capital market is would be only the beginning. The most challenging analytical and practical problems are created by the *process* rather than by the *results* of financial liberalization. Because it is almost impossible to make a once-and-for-all announcement and instantly eliminate all the institutional features of financial repression, the liberalization of financial markets is a process that will develop over a

significant period of time. There will necessarily be a transitional period during which 'hybrid' situations will be observed in cases where only some elements of repression have been eliminated. In fact, it is highly probable that the authorities increase financial repression in some segments of capital markets to ensure that the entire process of liberalization (which typically includes real markets as well) does not derail during the transitional period. For example, it may be necessary to introduce controls on capital movements to smooth the effects of external shocks on the domestic financial markets.

The analytical weaknesses in the treatment of the transitional period were apparent in the liberalization attempts in the Southern Cone of Latin America in the late 1970s when ill-designed financial policies led to financial distress.[2] In the chapters on Argentina and Turkey, both of which suffered from significant financial fragility after the implementation of the reform in the 1990s, there are important examples that resemble some features of the failures in the Southern Cone in the early 1980s. This is particularly true regarding capital inflows.

In fact, the need to amend the theory to include the analysis of the transition gave rise to the literature on the so-called *sequencing problem* in the 1980s.[3] The integration of the transitional period into the liberalization literature, however, has not been an easy task, mainly because the transitional period is one of disequilibrium and the approach was originally developed within an equilibrium framework. In the chapters by Schmidt and Nasution in this volume there is an assessment of the analytical and practical problems posed by the transitional period. Schmidt analyses the problem in the economies in Eastern Europe with respect to the role of the banking sector in controlling firms in the private and public sector. Nasution evaluates the pros and cons of gradualism (Malaysia) versus shock (Indonesia) in the implementation of the financial reform.

The change of regime from repression to free markets should *per se* improve resource allocation, because it frees the individual's behaviour from artificial constraints. However, a necessary condition for this is that private agents perceive that the authorities are determined to maintain the new regime. If private agents are not convinced that the elimination of regulations is permanent then they may not adapt their behaviour to the new situation and their decisions might be inconsistent with the survival of the new regime. For the same reason, the need to capture the credibility of the private sector from the very beginning of the reform process is stressed in the literature and is considered to be an important part of the liberalization policy. However, it is now understood that credibility is not equivalent to 'rules'.

The time consistency approach is more appealing than the debate on rules versus discretion, because it makes a simple yet powerful observation – what matters is not whether rules are 'superior' to discretion, but rather, whether a policy announcement, be it a rule or discretion, is credible. The most forthright manner in which a policy can be made credible is to couch it in an institutional environment whereby the policy announcement is 'locked in', once made. In other words, a rule is meaningless if it can be easily altered; discretion may be particularly coherent if it is formulated in the right manner, by the right people. A policy announcement is made time-consistent, then, if the costs of backtracking are high, and widely seen to be high, no matter whether such announcements follow a particular theme, or are discrete and individually disparate.

In the context of the formulation of monetary policy, time consistency has been interpreted to mean (1) that the credibility of the monetary authorities matters more than whether or not they announce the adoption of 'monetarist' or any other principles; and (2) that this credibility is enhanced when the central bank is distanced from the rest of the machinery of government, a point taken up later in this chapter. In the context of financial liberalization more generally, time consistency implies not so much the setting of a clear plan of action with hard targets that must be met at specified intervals, but rather the outlining of an agenda wherein regression is made difficult and expensive and the quality of its implementation is not in doubt among market participants.

The chapter on Nigeria illustrates this point with vigour and colour. Here, the authors show how uncertainty over the maintenance of the reform process was an important factor causing financial distress, which, in turn, enhanced the level of uncertainty prevalent in the financial sector.

The insistence on credibility in the literature, however, does not imply that the issue has been solved. The chapter on the Argentine case mentions that there is an exaggerated stress on fiscal disequilibrium, while the disequilibrium in the private sector debt and deficit does not receive the same attention. In the Argentine case, the current account imbalance was generated by the private sector deficit, a point also examined by Calvo in his chapter. He argues that the lack of credibility in the maintenance of the reform policy can lead to a consumption boom and, at the same time, to the false impression that the fiscal house is in order and that the degree of monetization has increased. This will occur because the temporary increase in economic activity pushes up both fiscal revenues and the demand for money. When the boom fades, the increase in the fiscal deficit and the fall in the demand for money lead to a balance of payments crisis.

1.3 FINANCE MATTERS

The McKinnon–Shaw Approach

The main reason why the McKinnon (1973) and Shaw (1973) approach has been so influential in policy-making in developing countries is not so much its emphasis on liberalization but rather the recognition that *finance matters for development.* In the 1970s, in contrast with the mainstream analysis of money and finance in the growth process, which neglected an independent role for such factors, McKinnon and Shaw made it clear that the lack of financial deepening was a relevant obstacle to development.[4]

The lack of financial deepening matters, but what does 'lack of financial deepening' actually mean? In our view, it means that some financial markets do not exist, while others do but are underdeveloped. That is, the markets for the intermediation of funds are incomplete and imperfect. This has real effects, because the absence of some key financial markets implies either that some transactions will not be carried out or that they will but at wrong prices. Growth, specifically, will be hindered because under incomplete and imperfect markets some contracts between savers and investors will not be possible or will stipulate wrong prices. In this regard, a significant insight from the liberalization school was that, *ceteris paribus*, the lack of financial deepening would result in the scarcity of savings and the misallocation of investment resources.

Owing to varying degrees of evolution of the market structure in developed and developing countries, Shaw (1973)[5] suggests in his seminal work that, to understand why finance matters for development, the theory of finance in developing countries should adopt a 'debt intermediation view' (DIV), which differs from the 'wealth view' (WV). The DIV takes into account the particularities of financial intermediation in developing countries, while the WV is more suitable for studying financial issues in developed countries. One distinguishing feature of the DIV *vis-à-vis* the WV is that the former emphasizes the role of credit in contrast to conventional monetary economics, which has a bias in favour of the assets side of the economy. The point is not that the agent's demand for deposits and bonds is irrelevant but rather that the credit side of the banks' balance sheets and the interactions between banks and the other sectors in the economy cannot be ignored in explaining why finance matters. This emphasis on the role of credit puts the banking system and firms' decisions regarding liabilities at centre stage on the DIV's research agenda.

Shaw's advocacy in favour of the DIV, nevertheless, gradually lost momentum in the liberalization literature, which favoured the study of

practical problems associated with the elimination of financial repression. Under the assumption that the analytical framework was correct, the failures in liberalization were attributed to errors in the sequencing of deregulation and to the inability of the authorities to gain control over money creation and/or the fiscal accounts to ensure macroeconomic stability. The findings of our project, however, suggest that to explain the implementation problems it is still necessary to have a deeper understanding of key phenomena related to the issues emphasized in the DIV approach. Specifically, the authors of the chapters in this volume emphasize the following points: the transformations in firms' capital structure following liberalization; the way in which governments finance the deficit and the composition of the stock of public debt; the effects on domestic credit availability of unexpected shifts in portfolio preferences of individuals regarding domestic *vis-à-vis* external assets after opening the capital account; and the evolution of the operational efficiency of the banking system. All these prove to be key factors for understanding the outcomes of financial reforms.

In our view, the comprehension of these factors entails reinvigorating rather than abandoning the spirit of the DIV. Reinvigorating the DIV implies consistently integrating into the analysis of liberalization experiences: credit rationing phenomena that are pervasive not only in the financial system but also in the bond and international markets; the peculiarities of agency problems in developing economies which give rise to financial fragility and macroeconomic instability; low capitalization and narrow diversity of productive activities 'represented' in stock markets; the role and determinants of the external finance premium for different categories of firms with differential access to segmented markets; the details of the credit channel for monetary transmission under different exchange and monetary policy regimes; the determinants of operational efficiency of banks and the optimal regulation of the financial system; the role of liquidity constraints, especially for those agents with imperfect access to financial markets.

The Role of Financial Assets

Although the growth in the supply of near-monies, derivatives, and other 'exotic' financial instruments may be seen as largely the response of profit-maximizing firms to the needs of asset consumers, the role of lower transactions costs (that is, improved technology) and a more accommodating institutional and legal environment in this process cannot be ignored.[6]

In the developing country context, a number of issues present themselves. First, despite liberalization, the immediate policy issue is not the control of a dizzying spiral of assets, as the expansion is likely to be within 'conventional' limits of customer needs and choice. Dollarization may be seen as an increase in the range of assets used by agents, but as the chapters on Argentina and Uruguay make clear, its evident benefits have to be weighed against a range of consequences at the macro and sectoral levels that may well change the calculus of the desirability of such systems.

Second, when it comes to asset supply, developing countries are 'takers' of the wide array of existing types of assets, which, in a deregulated and global environment, will present themselves as the need arises. That is, there is no particular aspect to asset supply in developing countries that cannot be covered by the available stock of assets that are known to market participants. This suggests that the relevant issue for the authorities in developing countries is not creation or innovation, but rather the proper management of the flow into the country of a wide range of financial assets from abroad.

Finally, the role of the market for government bonds during financial development and liberalization should be flagged. A wide market for government bonds plays a crucial role in providing signals to the rest of the financial markets. Specifically, the existence of a strong market for government bonds helps to provide a term structure of interest rates, which acts as a frame of reference for the private sector. For example, in the USA, the benchmark for long-term interest rates is the thirty-year government bond rate and for the short-term the treasury bill rate. If the market for government bonds is thin and/or weak then the market signals sent to the rest of the financial sector will also be weak and unreliable. This raises the level of uncertainty in the trade of financial instruments. Indeed, from a theoretical point of view, it is very difficult to conceive of the CAPM without the 'risk-free' rate provided by government bonds. (Another and wholly different strand of thinking will be briefly mentioned here. The increase in the availability and use of assets potentially makes the job of controlling monetary aggregates more complex. This issue is taken up later in this chapter).

There are many country-specific examples in this book about how and why finance matters for development when the market structure is incomplete and quantitative credit constraints are relevant. In particular, many of the chapters emphasize the real effects of bank behaviour and credit evolution. Schmidt concludes that because capital markets were largely absent in the East European transition economies, the ability of banks to establish

an inside money system and a hard budget constraint regime was crucial to the success of the macroeconomic transition. Calvo, in turn, stresses the effects of credit on the supply side in the context of the Mexican crisis. In the Argentine case, the explanation of the evolution of the activity level, the real exchange rate and the current account deficit relies heavily on the credit cycle triggered by the reform and the stabilization of the economy that followed the implementation of convertibility.

Managing and Allocating Risk

Capital markets in developing countries are typically very inefficient at processing both diversifiable and systematic risk. Regarding non-systematic risk, one of the most important obstacles observed in the countries that were analysed is the absence or narrowness of the stock market. Risks that can be diversified away when the stock exchange operates normally cannot be in developing countries because of the absence of well-functioning stock markets. Hence, given the expected return of a project, the difficulties to diversity risk through the market structure leads to 'wrong' combinations of risk and return. This determines either that socially productive projects are not profitable to any private agent or that firms try to 'internalize' diversification, incurring costs that imply a social waste of resources. For example, in Latin America the popularity of 'grupos' in industry and services seems to be associated, among other factors, with the necessity of diversifying risk in the absence of well-developed stock markets. The diversification of the grupo replaces the diversification of risk via the capital market. *Ceteris paribus*, this form of risk diversification generates deadweight costs associated with both lack of sufficient productive specialization of firms and difficulties for individuals – who do not share the property of a grupo – to diversity their portfolio. In this fashion, the lack of financial deepening has *real effects on growth*: profitable projects are abandoned because of the impossibility to finance them at the optimal risk/return combination or funds are misallocated owing to wrong pricing of risk.

There are also problems for managing systematic risk. The rudimentary financial development implies that it is very difficult to reallocate systematic risks via the existing market structure. That is, it is not possible to sign a contract to share non-diversifiable risks with those agents willing to bear it. Hence, the entrepreneur must decide whether to carry out the project and fully bear the systematic risk or to quit. Either decision has a cost in terms of efficiency for the whole economy. A point that worsens the imperfections in the allocation of systematic risks is that systematic

risk in developing countries has special characteristics that make it more 'corrosive' for economic efficiency. We come back to this point later.

Financial Intermediation and Transactions Costs

Financial intermediation may be considered the gamut of institutional arrangements within which savers interact with borrowers, thereby creating equilibrium in the financial sector. A principal determinant of the size and scope of the financial intermediation sector is transactions costs, which, in turn, may be said to be driven by improvements in communications and other technology, and legal impediments to trade in financial instruments. While changes in the relevant technological parameters, particularly in developing countries, may be assumed to be 'exogenous' (or readily importable), the legal and institutional financial environment is directly related to the nature of the financial liberalization.

Special attention should be paid to the overall approach to creating financial markets and intermediaries in developing countries. Should the Anglo-Saxon model of equity-based financial systems be encouraged, or should the German and Japanese bank-based models be encouraged? Singh's (1993) survey comes out in favour of the bank-based model. What is evident from the country case-studies in this book as well as the thematic chapters by Aivazian and Schmidt is that no model is a priori superior to the other. Issues related to risk management, transactions costs and at the extreme, fraud, may equally be linked to either model, because the strengths and weaknesses of each depend on the regulatory regime and institutional environment within which they operate. The more general lesson here is that particular conditions in the country in question should determine the ultimate prescription, not a general statement of principle of the intrinsic superiority of one model over the other.

In the financial sector, efficiency and transparency are not equivalent to technological prowess. There is a large literature on the potential destabilizing impact of 'far-too-advanced' technology in this sector. Witness, for example, the debate over the role of programme trading and derivatives in market stability, covered in Part 2 of Miller (1991). Few, if any, developing country financial sectors have reached the 'sophistication' of the North American or Western European bourses, but similar questions, adapted to local conditions, may usefully be raised.

In the case of developing countries, where financial sectors are still relatively underdeveloped, an additional issue arises. If there is an asymmetry among the key players, then the potential for destabilization exists. One example is the impact on exchange rates and reserves when capital is more

mobile internationally than it is within a country. This can and does happen when the domestic financial system is not as well developed or integrated, as one or a few national financial centres are with the international financial system.

Such a scenario has two likely implications. The first occurs if the inefficiency of the domestic recording and other back office functions allow some agents to take advantage, either legally or illegally, of the slowness of the system.[7] The second is if the imbalance between international and intra-national funds movement makes exchange rates and reserves more unstable than they would have been had the domestic adjustment mechanism been up to speed.

An alternative formulation of the asymmetry would be when foreign banks or financial houses operating within a developing country have access to more advanced technology (or other means) than their domestic competitors. This has implications for the development of a domestic financial sector, and methods of industry regulation. There is ample evidence of these features in the studies on Argentina, Nigeria and Turkey and in the chapter by Nasution.

High costs of intermediation tend to introduce a sizeable wedge between the cost of borrowing for the firm and the rate of return on savings for individuals. Under such circumstances, the firm faces a great differential between the costs of internal and external finance. A typical reaction to this is for the firm to 'internalize' the capital market via a high retention ratio. The firm tries to use as much of its own funds as possible to finance investment. This has costs in terms of growth. Once the funds are exhausted, many high-rate-of-return projects may be abandoned because of the sizeable premium that firms must pay for external finance.

The chapters on Argentina, Nigeria and Turkey are good examples of how difficult it is to reduce the spread between borrowing and lending rates after liberalization. In the case of Nigeria, additionally, the quality of the financial services remained very low. The government was obliged to set a minimum standard for the quality of the financial services, which in practice, of course, did not guarantee that the standards were met.

1.4 THE DISTRIBUTION OF WEALTH MATTERS

In some theoretical scenarios, wealth distribution does not matter from the point of view of efficiency. This is because the separation theorems will hold in such an economy. That is, because the Fisher separation theorem holds, the investment decision can be relegated to managers who will

maximize shareholders' wealth. Funds can be efficiently allocated from individuals with few productive opportunities and great wealth to individuals with many opportunities and insufficient wealth. Given that the portfolio separation principle holds, the riskiness of any given security is measured by its own characteristics in relation to the market, independent of an individual's risk preferences and, therefore, entrepreneurs can concentrate on their activities without worrying how individuals will manage the risks of their portfolios. In sum, in this world the distribution of resources among entrepreneurs and non-entrepreneurs does not matter.

But this does not hold when markets are imperfect. The imperfections in the process of transferring funds from those with resources to those with the best projects imply that entrepreneurs may not find financing and there could be a net loss for society. This is true in developed and developing countries alike. However, the lack of financial deepening means precisely that the distance between perfect markets and the real world is further in developing countries than it is in developed ones. Hence, the negative effects of market imperfections are likely to be more sizeable in developing countries.

This factor has a strong impact on the real side of the economy, especially during the transition period. Liberalization usually induces major wealth redistributions via changes in relative prices and as a consequence of the restructuring of the state. It may even happen that those with better entrepreneurial skills are adversely affected by the policy. If financial markets worked reasonably well then those who were favoured by the reform would finance entrepreneurs. However, in a financially underdeveloped environment this would not be possible. For example, because markets providing long-term financing for restructuring do not exist, the transitional period will be more difficult and less efficient.

These issues play a central role in many of the chapters in this book, but they are particularly stressed in the cases of Argentina, Eastern Europe, India and Turkey. Bernanke and Gertler (1990) suggest that the economy's growth capacity will be restrained when financial distress hinders the net worth of those agents with the greatest entrepreneurial skills. Given that a fall in net worth reduces the debtor's creditworthiness, a collapse in investment can occur if net worth is low enough. After analysing the complex interlinkages between the banking sector and enterprise control in the transition economies, Schmidt reaches the conclusion that the collapse of the long-term credit market was due to excessively high monitoring costs. Monitoring costs, in turn, are high because the net worth of firms is low, given the reduced value of assets after the implementation of structural reforms. In the cases of Argentina and Turkey, the

problem of the distribution of wealth between entrepreneurs and non-entrepreneurs appears in the context of financial fragility. In the case of Turkey, the authors emphasize the negative consequences of the increase of the interest rate on the entrepreneurs' balance sheets. In the case of Argentina, the problem is that the appreciation of the currency after liberalization heavily reduced the net worth of producers of tradable goods.

It seems that the issue of the negative effects of financial fragility during the transition calls for a more gradualist approach in the dismantling of government subsidies. This point is raised in the India study. The authors believe that the greater gradualism of the reform helped to prevent serious disruptions in economic activity, especially regarding the agricultural sector and small-scale industry. Indeed, it is a stylized fact of the liberalization experience that the beneficial effects of deregulation on investment have not been as great as had been expected. The effects of the reform on the net wealth of entrepreneurs and hence on financial fragility may help to explain this.

1.5 INSTITUTIONAL FACTORS AND MICRO–MACRO INTERACTIONS

From the research of this project it follows that there are two fundamental factors behind the difficulties encountered in managing risks and reducing financial transaction costs in developing countries: the low quality of the infrastructure-supporting transactions in the financial market on the one hand, and the special features of macroeconomic disequilibria on the other.

By 'quality of the infrastructure for financial transactions' we mean both systemic elements and the operational efficiency of firms in the financial sector. Of the systemic factors that tend to increase transaction costs, the imperfections in the functioning of the legal and regulatory framework stand out because they increase both *ex ante* and *ex post* costs of contracting.[8] These comprise not only the design of norms regulating financial transactions, but also the degree of efficiency and corruption of the judiciary system, the public officials in the central bank and so on. That is, there are difficulties to design and enforce contracts, ambiguity in defining property and control rights under certain states of nature, and so on. This generates 'institutional uncertainty' which affects credit risks. Under certain circumstances, there may be a disproportionate increase in the amount of the external finance premium. In fact, for some long-term financial instruments, the premium could climb so high that the market

could disappear. These issues are stressed in the chapter analysing the transition in East Europe, where the ambiguity in the definition of property rights was one of the most important elements generating financial distress and macroeconomic instability. The Nigerian case, on the other hand, is an extreme example of the high financial costs of 'institutional uncertainty'.

Another important systemic factor is the quality of practices regarding accounting and auditing. The lack of reliability and credibility of available information sometimes makes it impossible for the parties to design a contract in which the optimal quantities to be interchanged are different from zero. That is, there are financial contracts that go unsigned because of principal-agent problems that could be 'solved' if the financial market infrastructure related to the production and processing of information were more developed.

In this regard, we would like to highlight the positive externalities that a well-developed tax structure generates for the agents operating in the financial markets. If the authorities in charge of fiscal revenues control and monitor the reliability of the information in the firms' and individuals' balance sheets to avoid tax evasion then the information will be credible not only for the government but also for other market participants. This would foster the development of capital markets. In fact, the credibility of the agents' balance sheets is more important for the bond and stock markets than for the banking system. For one thing, it is possible that bankers and firms share inside information that is hidden from the authorities. But it is not possible to share 'hidden' information in that way with a myriad of investors in the stock market. We believe that the weakness in monitoring tax compliance in developing countries is a significant element working against capital market development.

The efficiency of the firms performing the intermediation of funds is crucial. To enhance the markets' operational efficiency, the firm must be able to allocate funds at minimum expense. To achieve allocative efficiency the costs of funds (adjusted by risk) must be the same for all borrowers, and the same must happen with the rate of return offered to savers. This has not been the rule in the countries we have covered. The typical causes of deviation from operational and allocative efficiency were: a certain degree of market power exerted by banks, the existence of market segmentation and difficulties in exploiting fully the economies of scale because of the smallness of domestic markets. This latter factor was especially important in those countries where a long-lasting period of inflation and macroeconomic instability induced a permanent drop in the demand for domestic assets. Note that there is a kind of vicious circle

between the lack of financial deepening and high operational costs of intermediation: costs are high because the market is small and high intermediation costs prevent the market from growing.

Another important element generating high costs is the effect of the transitional period on firms' behaviour. When the economy is moving from repression to deregulation, the intermediators lack experience in allocating credit in a free market setting, and hence will be forced to go through a period of restructuring and learning. This will cause the operational costs to increase in the short run.

The effects of macroeconomic disequilibria is the second important factor we mentioned above. Two features frequently present in countries with financial problems deserve to be highlighted. The first is that macroeconomic disequilibria tend to show signs of instability; they tend to be recurrent, relatively long lasting and deep. Second, there is typically far more built-in noise in the stochastic process governing the evolution of key macroeconomic variables such as the activity level, interest rates, wages and the exchange rate (IDB, 1995; Fanelli and Frenkel, 1995).

The recurrence and greater durability of macroeconomic disequilibria significantly affect financial markets. Instability tends to generate institutional uncertainty, because agents anticipate that the government may have to implement draconian financial measures to preserve a minimum of macroeconomic stability. Examples of this are the Bonex Plan in Argentina and the Collor Plan in Brazil, which expropriated a good part of financial wealth from depositors to deactivate the explosive trend of public debt.

The micro–macro and real–financial interlinkages described above derive from an assessment of situations of financial reform in the presence of macroeconomic instability, of which the Southern Cone experience of the 1970s is the most salient. Because financial liberalization inevitably results in higher real interest rates, the government deficit and the cost of servicing it increase precisely when these aggregates are supposed to be compressed. At the same time, revenue from seigniorage is reduced, a fact that is exacerbated if financial liberalization is accompanied by a currency-board-type of arrangement. Finally, the higher real interest rates will push precarious firms into bankruptcy, thus increasing pressure on their creditor institutions. But beyond the Southern Cone experience, the studies on Nigeria and Turkey in this book illustrate the inefficacy of financial sector reform without an accompanying change in fiscal policies.

The causes of many structural imbalances in the banking system can easily be traced to macroeconomic instability. When the inflation rate is high over a prolonged period of time the microeconomic structure of the

financial system adapts. Banks multiply branches beyond the optimal point so as to capture the inflationary tax. The portfolio preferences of individuals also change. There is a shortening of the planning horizon and the phenomenon of 'short termism' arises, while in some countries there is a dollarization of financial intermediation coupled with capital flight.

An important characteristic of the structural transformations due to macroeconomic instability, highlighted in the chapters, is that there is a certain asymmetry: once macroeconomic stability is diminished or deactivated then the structural transformations do not disappear automatically. When financial liberalization implies that the government ceases to absorb credit and there is a higher availability of credit to the private sector then the financial institutions face the problem of lack of expertise in assessing the quality of private projects. The restructuring of banks to obtain such expertise, nevertheless, is not easy, because the banks typically show an overinvestment in physical infrastructure (owing to branch proliferation) and an underinvestment in human capital. This situation cannot be changed in the short run and, in the meantime, operational costs are high. Hence, financial liberalization does not induce a dramatic reversal in the margin between borrowing and lending rates. Other asymmetric phenomena are dollarization and the fall in the demand for domestic deposits. Once instability has been removed, reversion is not automatic. If high inflation persists for a prolonged period of time then the agent will take costly actions to save transaction costs originating in the use of money. Once the costs are incurred, the new technology of transaction is used in spite of the after-stabilization reduction in the costs of using domestic money. The Uruguayan experience is a good case in point. After almost two decades of financial liberalization, there has been no reversion in the dollarization of the economy.

One last point related to macroeconomic instability is the way in which it affects non-diversifiable risk. Systematic risks can be subdivided into those that are broadly predictable by probabilistic calculation (such as the cycle) and those that are subject to uncertainty (such as financial crises and changes in regime) (Davis, 1992). The higher the macroeconomic instability, the higher is the component of uncertainty in systematic risks. Given that systematic risks can be shared but not eliminated, it follows that macroeconomic instability has costs. *Ceteris paribus*, if there is a correct pricing of systematic risk then the discount rate used for discounting the benefits of the project will be higher in unstable countries and, hence, a project that is profitable in a macroeconomically stable country may not be so in an unstable one. If market failures prevent the correct pricing of risks then it will result in financial fragility.

All the authors in this volume strongly stress the costs of macroeconomic instability in terms of both real and financial growth. In addition to the fiscal deficit, Calvo emphasizes the instability of the demand for domestic assets and external factors such as the variation in international interest rates. Powell makes the case for flexible exchange rates based on the Canadian experience. Although Canada is not a developing country, its experience is highly relevant, because it is a relatively small, open economy exposed to external shocks. It relies on foreign savings to finance a significant proportion of domestic expenditures. One of the most often cited sources of macroeconomic disturbances is the instability of capital movement. The chapters on Argentina, Turkey and Uruguay give centre stage to capital inflows as a determinant of the evolution of the economy under liberalization.

1.6 THE ROLE OF THE CENTRAL BANK

An important, indeed key, player in any discussion of the institutional environment within which financial liberalization occurs is the central bank. Today, five broad functions may be attributed to a central bank. It is: (1) banker to the government; (2) banker to domestic financial institutions; (3) regulator of the domestic financial sector; (4) responsible for currency issue and management of international reserves; (5) responsible for the operation of monetary and credit policy. These, in turn, may be classified, in the manner of Goodhart (1992), as 'micro' (functions 1–3, but particularly 3) and 'macro' (functions 4 and 5, especially 5). A sixth function, that of promotion of financial development, may be added in the case of developing countries. Rather than seeing this function as belonging to either the 'macro' or 'micro' sphere, it may be considered more as an overarching aim that underlies all central banking operations in developing countries.

In this respect, Collyns's (1983) analysis of central banking in developing countries is instructive. Besides the obvious point about these central banks reflecting, until recently, historical imperatives and arrangements, they typically have 'many' functions (with obvious repercussions on financial sector control and liberalization), because of (a) the shortage in many countries of the required technical expertise, and (b) the subsumption to the needs of 'national development' of the various societal institutions and traditions. Both point to large and powerful central banks, given very many tasks, in a general environment of *dirigisme*. The gamut of controls, regulations, and distortions that have come to characterize many

developing country financial sectors – all of which may fall under the broader implications of the moniker 'financial repression' – and which financial liberalizations now have undone or are attempting to undo, should thus come as no surprise.

The most important development in the contemporary practice of central banking is the emphasis on rational agents and credible policy. This section will not go into the intricacies of the huge literature on the rules-versus-discretion debate, save for citing the 'standard' reference on time consistency, Kydland and Prescott (1977), and the relevant literature on central bank independence.

In the context of the formulation of monetary policy, time consistency has been interpreted to mean that (1) the credibility of the monetary authorities matters more than whether or not they announce the adoption of 'monetarist' or any other principles, and (2) that this credibility is enhanced when the central bank is distanced from the rest of the machinery of government.

Empirically, the success of independent central banks has been taken to mean low inflation rates, and, sometimes, low costs, in terms of lost output, of fighting inflation (that is, a more inelastic Phillips curve).[9] The weight of the empirical evidence is in favour of the central bank independence hypothesis, and this may be found in Grilli *et al.* (1991), Cukierman *et al.* (1992), Cukierman (1992) Swinburne and Castello-Branco (1991), and Banaian *et al.* (1983).

Despite this, at the macro, inflation–output level, the debate is far from concluded, and here is not the place to delve into it. Suffice to say that a number of issues remain to be addressed: (1) Do independent central banks bring about low inflation, or do societies predisposed to monetary discipline more easily accept independent central banks? (2) Do we have a long enough track record, and among enough countries, to make a proper determination on the matter? and, related to this, (3) Does it follow that extending independence to central banks in a host of countries around the world will 'result in' lower inflation rates – that is, is independence either a necessary or a sufficient condition for success in the fight against elastic Phillips curves?

The macro-level issue outlined above does impinge on more sectoral and financial liberalization issues, but this has not received the same attention among researchers as the larger debate. Principally, two issues should be addressed.

First, what are the links between successful financial liberalization and independent central banks? More generally, what constitutes time-consistent policy when it comes to dismantling and rationalizing the appa-

ratus of repressed financial sectors? Clearly, credibility in, say, denationalizing a banking system, or attracting funds into it, or improving the quality of its lending, requires that the policy move be well-announced and permanent. How important is the rate of inflation (and perhaps more importantly, its variability and predictability) before, during and after a financial liberalization? The answer to the second question is becoming clear. As noted earlier, financial liberalization during macroeconomic instability can go badly wrong, and surely if reforms to the central bank enhance its credibility then this is a desirable development. However, the first question goes to the very heart of the matter of credibility and institutional reform.

The interplay between extending a central bank's statutory independence, its actual independence and its somewhat traditional role as regulator of and lender of last resort to the commercial financial system is a complex matter to which no clear answer exists at present. The literature, even for the Federal Reserve and European countries, is mixed or silent on this matter.[10] 'Classic' contemporary statements on the need for and operationalization of central bank independence, such as Fair (1979) and Burns (1977), concentrate on *distance from government* in their characterization of independence, and here the nature of appointment and duration of term of senior management, or statutory objectives, for example, get much attention.

Empirical measures of independence, too, concentrate on such criteria. Only Grilli *et al.* (1991) explicitly consider 'banking supervision *not* trusted to central bank, or central bank alone' as counting *towards* more independence. The logic here is as follows. By delegating supervision to a separate entity, and leaving solvency finance issues to a private and fully funded deposit insurance scheme, there is less pressure on a central bank to step in and 'save' a bank or banks (that is, irate depositors) in crisis by monetizing the losses, and thus violating a credit and inflation ceiling.

But in developing countries, where even middle-income depositors may be poor, and – as in Africa and Central America – increasing democratization makes governments particularly responsive to such public pressure, divorcing central banks from their financial sector role is impractical. But if indeed this distinction is pursued as a matter of policy then care has to be taken in designing a system that contains an independent central bank, a credible public supervisor and an actuarily sound insurance system. The lessons from examining episodes of financial and monetary reforms in South Korea, Malaysia and Indonesia suggest that prudence and rectitude may be more important than independence, and that in financial matters the latter does not imply the former.[11]

More generally, it remains still to be seen just how 'Chinese' the walls are in countries where the relevant supervision and insurance functions are entrusted to bodies other than the central bank.

This in turn leads to the larger issue of the impact of financial liberalization on the money and credit creation process and the conduct of monetary policy more generally in developing countries.

Two broad strands of thought should be distinguished here. The first is political economic, and derives from the 'political business cycle' approach starting with Nordhaus (1975), and comprising, as notable contributions, Frey and Schneider (1981), Waller (1989), Alesina (1989), Cukierman and Meltzer (1989), and Roubini and Sachs (1989). The gist of this line of thought is that macro-economic aggregates are, not surprisingly, responsive to political and social institutions and changes in a country. One example has already been noted – pressure to compensate the losers from a financial sector failure may affect credit targets, the degree of affectation depending on the degree of independence of the central bank and related bodies.

Here, one would simply add that the impetus for, and speed and nature of, the financial liberalization itself is endogenous to the political economy of a country, buffeted, to a greater or lesser extent, by external pressure for stabilization and adjustment. It follows that it may be worth studying how various cases of financial liberalization came about.

From this, however, a second and more technical matter arises. Simply put, how do the relevant money and credit multipliers behave during and after liberalization, particularly as capital markets become globally or regionally integrated, and widen and deepen (that is, as the number and nature of financial instruments increases)? Brunner states:

> Money is still best defined in the classical tradition as referring to any object generally accepted and used as a medium of exchange. Financial innovations associated with technological or institutional changes do not modify this definition. They do however change the empirical counterpart of the definition and this requires intermittent changes in the measurement procedures for the nation's money supply. (Brunner, 1992: 803).

It is evident that in most developing countries financial liberalization is accompanied by a more unstable money supply process than earlier. This in itself is not a condemnation of liberalization, particularly when causality from one to the other cannot be clearly established. It is entirely possible that this instability is symptomatic of the same events that lead

national authorities to reform their financial sectors. What is clear, though, is the larger issue raised by Brunner above. At one extreme, the discussion in the study on Argentina suggests quite plainly that in the presence of the Convertibility Plan the central bank has practically no powers. In countries such as Turkey and Uruguay, where capital flows (in and out) have played a large role, important issues arise about the ability of and indeed desirability for the domestic monetary authorities to control these (and by extension domestic money and credit) to any significant extent.[12]

We do not claim to have the last word on this matter. What we do understand from the work presented in this book is that financial liberalization in an era of globalization forces us to reflect further on what constitutes money, what the ambit of the financial sector should be, and who should play a key regulating role in it.

1.7 MARKET LIBERALIZATION OR MARKET CREATION?

From the chapters in this book it follows that government 'failures' are highly relevant in explaining the lack of financial deepening, but, as the previous discussion shows, they are not the only important factors. In the literature on liberalization, however, government failures were given the prominent role in generating 'market repression' and, therefore, the lack of financial deepening. Why? Our hypothesis is that, in the 1970s, the accent on institutional factors (such as interest rate controls or the inflationary finance of public deficits) as obstacles to financial development could be understood in light of the pervasiveness of these phenomena. This historically determined emphasis, nevertheless, has had a cost in the long run. It was implicitly understood that the abandonment of repressive policies would automatically result in financial deepening. This led to the disregard for other crucial institutional factors that generate market failures in developing countries, such as the underdevelopment of the *legal and regulatory framework*; the lack of skilled human resources and of experience regarding screening, monitoring and enforcement of contracts in a free market environment; and so on.[13] Another side-effect of the emphasis on the role of the public sector was the incorrect analysis of the factors determining macroeconomic disequilibria in the context of liberalization experiences. The stress on the role of the fiscal deficit and policy mismanagement resulted in the overlooking of other relevant causes of macroeconomic instability. This was particularly true of the private sector tendency to generate widening deficits in the wake of liberalization that lead to unsustainable current account deficits. The neglect of this point

impeded the authorities from implementing corrective measures in advance. The belief that the private sector is 'always right', if the fundamentals are right, impeded the authorities from foreseeing the crises in Chile in the early 1980s and in Mexico and Argentina in the 1980s where the public sector accounts were equilibrated.

To make a proper evaluation of financial liberalization, ultimately, the proverbial short and long runs – and the adjustment path from one state to the next – have to be delineated. The evidence and discussion alluded to earlier in this chapter strongly suggest that financial liberalization reduces distortions and rent-seeking behaviour in the credit markets. The jury is probably still out on the larger and related questions: Do liberal financial sectors foster financial development better than illiberal ones, or not? And, is some degree of *dirigisme* necessary to put in place the preconditions for financial development before it is then best left to the forces of the market to take over the process of widening and deepening?

The emphasis on liberalization and repression in much of the literature has obscured the main goal of any policy of financial reform: given that finance matters for development, to eliminate the negative effects of the lack of financial deepening on growth potential, it is necessary both to *create financial markets* and to *improve the functioning* of existing markets. It is very well known, nevertheless, that there is no market economy with a complete structure of markets. Hence, the real-world-amended aim for policy-makers in developing countries is, in fact, to reach as complete a structure of financial markets as possible, which, in turn, means as complete as the one existing in developed countries. One of the lessons that could be drawn from this project is that it is better to conceive of the problem of market liberalization as the problem of creating and improving financial markets in a context where the ultimate long-run goal is the achievement of a liberalized financial structure. Yet, the existence of a liberalized financial system should be conceived of as the conclusion and not the beginning of the reform process. The achievement of a financial system that is as liberal as possible should be the indicator that the reform process to create the absent markets has finally succeeded.

This view has some advantages for both research and policy-making. In this view, the success or failure of a financial policy is judged by the results achieved in 'filling the gaps' in the structure of financial markets. Besides, it is not necessary to assume *a priori* that all interventions are detrimental to market development under all circumstances. This is specially true because of two factors that call for government action: structural causes of market failures and the existence of a transitional period during which markets will be operating in a disequilibrium. For this

approach there is no contradiction between the strategies of Hong Kong and Korea. In terms of the research agenda, the advantage is that research does not end but rather begins with reform policies oriented to liberalization. For example, it is necessary to investigate why a country like Argentina, which eliminated almost every element of financial repression in the 1980s, has not achieved a level of financial deepening that is higher than that in the 1960s, which were 'years of high repression'. In other words, if government failure is not the only cause of financial underdevelopment then the logical question is: What other factors are there? Stiglitz (1994) is a good example of how much can be learnt in trying to answer this question. Our own guess, after having completed the project, is that a deeper analysis of institutional, regulatory and legal factors and the interaction between micro and macro elements would be a safe bet.

Notes

1. Stiglitz (1993) argues that financial markets are significantly different from other markets and more prone to failure. He then discusses seven key manifestations of market failure in the financial sector, which suggests that some amount of financial repression may be beneficial until very advanced stages of the development process. Gibson and Tsakalotos's (1994) survey also argues along similar lines, as does much of the literature assessing the East Asian experience. For a recent contrarian view see Coles's chapter in Harwood and Smith (1997).
2. On the liberalization attempts in the Southern Cone, see Diaz-Alejandro (1985).
3. On the problem of sequencing, see Fanelli and Frenkel (1993) and the literature cited there.
4. Prior to the work of these authors there was an implicit assumption that finance did not affect the rate of growth of the economy. Tobin's (1965) suggestion that the rate of change of money creation could have a bearing on the level of capital deepening was downplayed and criticized by the mainstream in monetary economics. In particular, Sidrauski (1967) and Sargent and Wallace (1973) developed growth models in which money creation did not affect any real variable.
5. The most important distinctive characteristics mentioned by Shaw are: market segmentation; short-term horizon for decision-making owing to high levels of uncertainty; difficulties in the process of information-gathering; low factor mobility; reduced capital markets and difficulties in distinguishing between internal and external debt in relation to the private sector.
6. See, for example, Rose (1993) for accounts of the overall environment within which the explosive growth in the number of financial instruments has flourished.
7. This is one of the reasons given for the scandal in 1993 in the Indian financial system.

8. We use the terms in the sense of Williamson (1990). *Ex ante* costs are incurred before the transaction takes place. The contract must be drafted and the terms of the transaction must be negotiated. *Ex post* costs are incurred in consummating and safeguarding the deal as originally struck.
9. À la Lucas (1973) – that is, the more inelastic the Phillips curve, the smaller the rise in unemployment for a given reduction in inflation.
10. One recent exception is Heller (1991), who argues in favour of a limited mandate for the central bank, in this regard. McCallum (1994) uses simulations of US data from the 1970s and 1980s to suggest that a central bank can adhere to a monetary policy rule while also fulfilling its function as a lender of last resort.
11. In this respect, the case of the Banque Centrale des États de l'Afrique de l'Quest (BCEAO) is instructive. Using the criteria set forth in Grilli *et al.* (1991), Medhora (1996) finds the BCEAO to be very independent – easily in the top third of OECD country rankings, and probably the most statutorily independent central bank among those in developing countries through much of its history. While this did produce an enviable inflation performance until the early 1980s, the macroeconomic problems of the BCEAO region are well known (culminating in the devaluation of the CFA franc in January 1994), and most countries in its purview have had troubled financial sectors. The BCEAO is no longer solely responsible for the commercial financial system, but it remains to be seen how 'Chinese' the walls really are. For a discussion of recent financial sector crises, see Sundararajan and Balino (1991), which contains case-studies of Argentina, Chile, The Philippines, Thailand and Uruguay. Akyüz (1993), in a survey that is on the whole sceptical of 'doctrinaire' financial liberalization, comes out in favour of retaining control of several aspects of the financial sector, on grounds of prudential regulation.
12. For an analysis of the recent experience of developing countries with capital movements, see Helleiner (1996) and Ffrench-Davis and Griffith-Jones (1995).
13. The 'second' McKinnon is far more aware of these factors. In McKinnon (1991) there is much richer analysis of institutional factors, the dynamic problems and the role of the state and institutions in the transition to a market economy.

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Part II
Country Case Studies

2 Argentina

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2.1 INTRODUCTION

The first important attempt to liberalize financial markets in Argentina took place between 1977 and 1981, and it was a complete failure. Throughout the 1980s, the degree of 'financial repression' oscillated but interest rates were basically market-determined. However, the financial system operated under important distortions related to the volatile macroeconomic environment.

The implementation of the Convertibility Plan (CP) in March/April 1991 and the drop in international interest rates gave a decisive thrust to the liberalization policy undertaken in mid-1989, whose aim was to restructure the economy along the lines of the 'Washington Consensus'. Two distinctive features characterized the Argentine reforms. The first was the adoption of a 'big bang' approach, where sequencing considerations were completely disregarded. The second was the establishment of a convertibility regime *by law*, which requires the central bank (CB) to back the whole monetary base with foreign exchange reserves. Besides, the new CB charter drastically limited the scope of monetary policy and the CB's role as lender of last resort.

In fact, the Argentine liberalization programme tried to transform the whole structure of capital markets by increasing the participation of the private sector in the allocation of loanable funds and in the pricing of risk, and by rapidly eliminating both the distortions existing within each market and the barriers that could limit competition between the different segments of the capital market. Integration with the international capital market was reinforced with the Convertibility Law, which allows contracts to be denominated in any currency. The foreign exchange market was completely deregulated and currently there are no restrictions on buying and selling currencies.

The main purpose of this chapter is to analyse the Argentine experience with financial liberalization after the implementation of convertibility. The approach adopted favours a comprehensive analysis that takes into account as many financial instruments and agents as possible and

addresses what has happened with credit generation in terms of quantity, quality (maturity, for example) and allocation patterns.

There are good theoretical and/or methodological reasons for adopting a broad approach in terms of the financial markets considered. First, it is in the tradition of the liberalization literature to adopt a 'debt-intermediation view' to study the problems of financial development (Shaw, 1973), an approach where the process of credit generation is no less important than the process of money creation. Second, the discussions on the virtues and shortcomings of policy packages that followed the first attempts at freeing financial markets showed the need to consider a broader asset menu when analysing, for example, whether liberalization policies induced financial deepening. Thus, there could be an increase in the demand for deposits in the banking system without financial deepening if, after liberalization, there is a substitution between different instruments instead of an increase in their total demand (Taylor, 1983). A richer menu is also important in examining sequencing problems and, especially, the relationship between external and domestic financial liberalization.

Thus, to give a consistent view of the development of the whole structure of intermediation, this chapter will examine: (1) the evolution of the matrix of assets and liabilities (MAL) of the economy after the implementation of liberalization; (2) firms' portfolio decisions on the basis of a sample of firms quoted on the Buenos Aires Stock Exchange; and (3) performance indicators of the banking system.

Although we will define a broader than usual quantitative measure of financial deepening by using the MAL, we have also made efforts to incorporate *quality* measures of both the assets and the institutions that create them. The Southern Cone liberalization failures[2] led to a greater concern about the effects of deregulation on moral hazard, a concern that suggests paying attention to the evolution of the solvency and liquidity of the banking sector and hence to the impact of liberalization on systemic risk. Consequently, we construct a set of indicators to assess the degree of 'excellency' achieved by capital markets after the reform, taking the Basle norms as a first step. However, other indicators, apart from capital adequacy, are necessary, especially in economies where there is an important degree of dollarization in the financial system, while the role and quantitative significance of (non-diversifiable) systemic risk as a determinant of asset returns tends to be much more important than in developed countries.

Another reason for adding quality indicators to assess the degree of financial development has to do with the management of risk and information within the system. A situation is conceivable where there is no increment in the financial assets/GDP ratio, but there is an improvement in the

quality of such assets in terms of their efficiency to spread risk or process relevant information. For example, in applying prudential regulation, a particularly conservative central bank will strongly discourage risk-taking by commercial banks. But this may depress the rate of growth of financial assets created by the banking system, thus restraining financial deepening. However, by reducing the degree of systemic risk faced by the system, this behaviour of the regulator could be very friendly to financial development. An additional example has to do with the term maturity of financial instruments. It is a well-known fact that underdeveloped capital markets are characterized by a weak supply of long-term credit. Consequently, a longer term-maturity of financial instruments would be an improvement. However, there might be an increase in the term maturity of assets without an increase in their total supply. This would occur if there were a portfolio shift in favor of assets of longer maturity after liberalization. To detect this kind of improvement it is necessary to analyse the term structure of assets and liabilities in the books of financial intermediaries. A very similar situation would occur were there to be a major substitution of equity shares for bank deposits in the portfolio of agents over time. Such a movement in favour of the equity market and against the banking system would allow improvement in the ability of each agent to manage and diversify risk. But it would appear as a weakening of the financial deepening process as measured by the money/GDP ratio.

Finally, the role of 'informal' markets in the intermediation of funds should be addressed. Given that in Argentina the bulk of the assets thus generated consist of inter-firm credit, the analysis of the firms' balance sheets may help to uncover the effects of financial liberalization on these practices.

The remainder of this chapter is structured as follows. Section 2.2 presents analysis of the changes in the financial structure during the period under study, and Section 2.3 deals with the evolution of the banking system under liberalization; the discussion in each section is organized around a series of salient 'stylized facts'. Section 2.5, the last, reviews the main conclusions and suggests some directions for further research.

2.2 FINANCIAL DEEPENING AND THE CAPITAL STRUCTURE OF FIRMS

Given the close interaction between developments in the financial sphere and the general macroeconomic environment, in what follows we briefly describe the economy's evolution during the period 1991–5.

Table 2.1 Argentina: main macroeconomic indicators

	1990	*1991*	*1992*	*1993*	*1994*	*1995*
GDP at market prices (billions of US dollars)	141.4	180.9	228.8	257.7	281.6	285.0
Real GDP growth (%)	0.1	8.9	8.7	6.0	7.4	–4.4
Annual inflation (CPI)	1343.9	84.0	17.5	7.4	3.9	1.6
Gross domestic investment (% of GDP)	14.0	14.6	16.7	18.4	20.0	18.4
National savings (% of GDP)	16.2	13.8	13.5	15.3	17.1	16.4
Real exchange rate[a]	100.0	75.0	64.2	60.2	59.3	58.4
Current account (billions of US dollars)	1.8	–2.8	–8.3	–8.3	–11.3	–5.3
Capital account	–1.0	4.7	12.6	12.1	11.9	–5.2
Trade account (billions of US dollars)	8.2	3.7	–2.6	–3.7	–5.8	0.9
Exports (billions of US dollars)	12.2	12.0	12.2	13.1	15.8	20.8
Imports (billions of US dollars)	4.0	8.3	14.9	16.8	21.6	19.8
Reserves (billions of US dollars)	4.6	8.0	11.0	15.3	16.0	16.0
M2/GDP (%)	5.5	6.3	8.2	10.8	11.9	10.5
M2*/GDP (%)[b]	7.0	9.6	12.8	17.5	20.3	18.5
Total external debt (billions of US dollars)	62.2	65.4	67.8	76.9	92.3	10.0
Non-finance public sector deficit (% of GDP)	2.7	1.3	0.7	–1.0	0.1	1.0
Primary deficit (% of GDP)	–1.4	–1.7	–2.2	–2.2	–1.0	0.5
Privatization (cash) (% of GDP)	0.5	1.2	0.8	0.2	0.2	0.4
Primary deficit (excl. private.) (% of GDP)	–1.0	–0.5	–1.4	–2.0	0.8	0.9
Unemployment rate[c]	6.3	6.5	7.0	9.6	11.5	17.5

[a] WPI EEUU/CPI Arg.
[b] Includes dollar deposits.
[c] Average of May and October surveys each year.

Source: Elaborated on the basis of Central Bank and Ministry of Economy data.

After the implementation of the CP in March 1991, the economy has undergone two very different phases (see Table 2.1). In the first, inflation was drastically reduced but there was a significant appreciation of the real exchange rate. The period was characterized by a significant growth in GDP, rising trade deficits and capital inflows, financial deepening and increasing tax revenues. In contrast, the second phase, marked by the so-called tequila effect, showed a deterioration in all these aspects and witnessed a financial crisis that put the CP on the brink of collapse. Catastrophe was avoided, but only with the exceptional support of multilateral institutions and after incurring significant quasifiscal costs. On the other hand, the recession greatly accelerated the pace of the required external adjustment.

The Matrix of Assets and Liabilities and the Stylized Facts of Liberalization

On the basis of the MALs in Tables 2.2 and 2.3, we can say there is 'financial deepening' when the sum of the total assets (or liabilities) appearing in each cell of the MAL increases in relation to GDP. This measure takes into account all operations of intermediation carried out in the formal system. In the same way, the level of domestic financial deepening can be calculated by summing up the cells corresponding only to domestically generated assets/liabilities.

The MALs show that there was financial deepening in the period 1991–5, because (re-expressing the MALs in nominal terms) the total amount of assets in the economy rose by $114.8 billion, which implies a rate of creation of new financial assets of 15.1 per cent per year. As a consequence, the total assets/GDP ratio rose from 75 per cent in 1991 to 89 per cent in 1995). Domestic financial deepening also took place, not only in the form of an increase in the quantity of assets and liabilities, but also through a change in the sources of creation of financial instruments in favour of the domestic ones. Thus, while in 1991 foreign debt represented 39 per cent of the 75 per cent assets/GDP ratio, its share dropped to 22 per cent of an 89 per cent assets/GDP ratio in 1994. However, many of the results in terms of higher financial deepening were not robust enough to resist the Mexican shock.

In order to have a more complete assessment of the qualitative aspects of the process in what follows, we present the most relevant stylized facts of the period.

(1) There was a dramatic change in the process of money creation, which became much more dependent on capital inflows.

Table 2.2 Argentina: IV. 1991 financial matrix (as a percentage of GDP)

		Central bank	*Financial sector*	*Public sector*	*Private sector*	*Rest of the world*	*Total assets/ liabilities*
(1)	MB	–4.2	1.6		2.6		4.2
(2)	SD$		–1.7	1.0	0.7		1.7
(3)	TD$		–3.1	0.6	2.5		3.1
(4)	SDE		–0.4	0.0	0.4		0.4
(5)	TDE		–3.3	0.0	3.3		3.3
(6)	L$		10.5	–3.4	–7.1		10.5
(7)	LE		6.7	–1.5	–5.2		6.7
(8)	BG$	0.4	0.5	–1.3	0.4		1.3
(9)	BGE	0.6	0.5	–4.1	1.5	1.5	4.1
(10)	FRC	4.4				–4.4	4.4
(11)	FRF	0.0	0.7			–0.7	0.7
(12)	X	–1.9	–3.4	–26.5	–2.9	34.7	34.7
(13)	TA	5.4	20.5	1.6	11.4	36.2	75.1
(14)	TL	–6.1	–12.0	–36.8	–15.2	–5.0	75.1
(15)	NW	–0.7	8.5	–35.1	–3.7	31.1	
(16)	TAE	5.0	7.9	0.1	5.2	36.2	
(17)	TLE	–1.9	–7.2	–32.1	–8.1	–5.0	
(18)	NWE	3.1	0.7	–32.0	–2.9	31.1	

The financial instruments that appear in the rows are: (1) the monetary base (MB); (2) sight deposits denominated in pesos (SD$); (3) savings accounts and term deposits denominated in pesos (TD$); (4) sight deposits denominated in dollars (SDE); (5) savings accounts and term deposits denominated in dollars (TDE); (6) banking credit in pesos (L$); (7) banking credit in dollars (LE); (8) government bonds in pesos (BG$); (9) government bonds in dollars (GBE); (10) foreign reserves of the Central Bank; (11) foreign reserves of the banking system; and (12) foreign debt with foreign banks. The sum of the assets held by all agents of each financial instrument appears in the last column of the matrix.

The agents in the columns are: the central bank, the financial system, the non-financial private sector, the non-financial public sector and the rest of the world. The algebraic sum of the magnitudes appearing in each cell of a column represents the net financial worth (NW) of the agent. The value of NW for each agent appears in row number 15 in the matrix and it is the difference between row 13 (agent's total financial assets, TA) and row 14 (agent's total liabilities, TL). In rows 16, 17 and 18 the TAE TLE AND NWE variables stand for the part denominated in dollars of the agents' total assets, total liabilities and net financial worth respectively.

Source: Elaborated on the basis of Central Bank, Ministry of the Economy data.

Table 2.3 Argentina: III. 1995 financial matrix (as a percentage of GDP)

		Central bank	*Financial sector*	*Public sector*	*Private sector*	*Rest of the world*	*Total assets/ liabilities*
(1)	MB	–4.5	1.0	0.2	3.4		4.5
(2)	SD$		–2.4	0.9	1.4		2.4
(3)	TD$		–4.7	0.5	4.1		4.7
(4)	SDE		–0.3	0.0	0.3		0.3
(5)	TDE		–7.7	0.2	7.5		7.7
(6)	L$		9.3	–1.7	–7.6		9.3
(7)	LE		11.4	–1.3	–10.1		11.4
(8)	BG$	0.0	0.4	–2.4	1.5	0.5	2.4
(9)	BGE	0.6	1.6	–18.1	3.2	12.7	18.1
(10)	FRC	4.5				–4.5	4.5
(11)	FRF	–0.1	1.0			–0.9	0.9
(12)	X	–2.5	–4.6	–7.7	–7.7	22.5	22.5
(13)	TA	5.2	24.6	1.8	21.4	35.6	88.6
(14)	TL	–7.1	–19.5	–31.2	–25.4	–5.4	88.6
(15)	NW	–1.9	5.1	–29.4	–4.0	30.2	
(16)	TAE	5.2	14.0	0.2	10.9	35.1	
(17)	TLE	–2.6	–12.5	–27.2	–17.8	–5.4	
(18)	NWE	2.6	1.5	–27.0	–6.8	29.7	

Source: Elaborated on the basis of Central Bank, Ministry of the Economy and Carteco data.

The strict limits imposed by the new Central Bank Charter (CBC) on the expansion of rediscounts and credit to the Treasury were strictly enforced (until the tequila period), so the higher demand for cash could only be satisfied via accumulation of reserves. In effect, in the period 1991–5, the monetary base increased by $5.2 billion and foreign reserves grew by $4.9 billion, despite the permanent current account deficits. This was possible because of huge surpluses in the capital account. So, capital inflows not only financed the increase in domestic absorption, but also the remonetization of the economy after hyperinflation. Under these circumstances, the Mexican shock – which changed the portfolio preferences of the private sector against peso-denominated assets – led to a 20 per cent drop in the monetary base in 1995, the first fall registered during the CP.

(2) Demonetization and dollarization characterized the 1980s. After liberalization the former was reversed but at the cost of deepening the latter.

Although a recomposition in the demand for money is an expected result of a successful stabilization policy (and the M2* (m2 + dollar deposits)/GDP ratio rose from 9.5 per cent to 18.3 per cent during 1991–94), what was specific to the Convertibility Plan was the way in which this recomposition occurred. By granting contracts in dollars full legal status, the government discouraged the intermediation of domestic savings abroad, but this measure gave an additional stimulus to the dollarization process. Thus, while the private holdings of deposits in pesos grew by 200 per cent during 1991–4, those denominated in dollars grew by 248 per cent over the same period. Moreover, the December 1994 shock reinforced the dollarization trend, because it provoked a deeper contraction in peso-than in dollar-denominated deposits.

(3) There was a marked increase in the amount of credit generated by the banking system and deep changes in both the sources of credit and the allocation pattern

The increase in demand for deposits in the domestic banking system allowed a remarkable expansion in the supply of credit. In effect, total loans grew by $27.5 billion between December 1991 and December 1995, mainly supported by a $26.7 billion increase in deposits. However, the $6.7 billion rise in foreign liabilities, in the context of easy capital inflows, was also important in credit generation via the financial system.

As a result of the higher degree of dollarization, the increase in the supply of credit denominated in dollars ($20.1 billion) was much higher than the increase in loans in pesos (7.3 billion). Consequently, loans in dollars represented 55 per cent of total loans in the third quarter of 1995.

The reform succeeded in avoiding the crowding out of the private sector in the credit market, which benefited from a 126 per cent rise in its loans against a reduction of 4 per cent in the credit allocated to the public sector. As a consequence, the latter's share in total credit fell from 29 per cent to 14 per cent.

(4) The public sector produced a complete reorganization of its balance sheet that resembled the reorganization of a firm trying to avoid bankruptcy.

With a view to reduce the level of systemic risk faced by private economic agents, the authorities advanced on three main fronts to improve the public sector's financial position. The first was the signing of the Brady agreement in late 1992. Second, the massive privatization process, in which

more than $17 billion in nominal value of public debt was repaid or rescued via debt – equity swaps. Third, the government consolidated its debt with its suppliers and with retired workers from 1991 on by issuing domestic bonds denominated in dollars ($7.1 billion) and pesos (5.5 billion). Table 2.3 shows the consequences of these three initiatives, particularly the sizeable increase in public bonds, because both the Brady Plan and the consolidation of debt existing prior to the CP implied a rise in its stock. Moreover, the latter explains most of the 30 per cent rise in the total public debt, an increase that did not originate in the accumulation of deficits during the period. The public debt/GDP ratio, in turn, declined from 35 per cent in 1991 to 29 per cent in 1995.

(5) As in previous experiences of liberalization, the economy increased its use of foreign savings.

The rest of the world provided net financing to the other aggregate agents during the period for over $29 billion. In effect, all domestic sectors experienced a decline in their net wealth. It follows that, after liberalization, Argentina increased its use of foreign savings since there was no increase in net domestic financial savings.

As a consequence of this and of the dollarization of domestic portfolios, there was a marked increase in the level of agents' financial exposure to the devaluation risk. However, the evolution of net financial worth in dollars that results from the simultaneous increment in assets and liabilities differs greatly among domestic agents. While the private and public sectors increased their levels of financial exposure in dollar-denominated liabilities, the opposite occurred with both the Central Bank and the financial sector.

The Changes in the Firms' Portfolio Decisions

The above-mentioned changes in the financial environment affected the firms' financial decisions. On the basis of the balance sheets of the firms quoted on the Buenos Aires Stock Exchange,[3] the following stylized facts can be identified.

(1) The capital structure of firms changed. There was a generalized preference for higher leverage ratios after liberalization.

The greater availability of credit following liberalization allowed firms to almost double their leverage levels between 1990 and 1995 (Table 2.4). This is in contrast to the 1980s, when credit rationing forced private corporations to work with leverage ratios that were lower than optimal or desired. Although the rate of growth differs among the groups of firms,

leverage levels in 1995 were not too different across them, and the average leverage ratio (67.5 per cent) is similar to that observed in other large economies of Latin America (82 per cent in Brazil and 62 per cent in Mexico (Lopez Larroy *et al.*, 1995)).

(2) *There was no improvement in the predominance of short-run financing in the debt structure of firms. Owing to market segmentation, however, the situation of medium-sized firms is much worse.*

The short-run/long-run liabilities ratio for the whole sample fluctuated around 67 per cent between the end of hyperinflation and the beginning of 1995 (Table 2.5). This is fully congruent with the stylized facts obtained from the evolution of the MAL. Despite the increase in the leverage ratio and in the availability of credit, the inability of the system to generate long-run financing persisted after liberalization.

However, there is a marked difference between the largest firms (the privatized and holdings in our sample) and the rest; while the leverage ratio is about the same, the former are much less dependent on short-run financing, and there is no tendency for this difference to disappear. This may reflect market segmentation. Indeed, only the largest Argentine firms have easy access to the international capital market and need not rely on the domestic banking system for credit. Thus, banking debt represents 26.4 per cent of total liabilities in the case of large firms and 43 per cent in the case of medium-sized ones (Lopez Larroy *et al.*, 1995).

With regard to the currency composition of debt, the holdings and newly privatized corporations show an increase in the proportion denominated in dollars after liberalization, while the opposite occurs in the remainder of the sample.

Table 2.4 Argentina: leverage[a]

	Total	*Tradable*	*Non-tradable*	*Privatized*	*Holdings*
1990	34.5	36.5	37.0	n.a.	22.9
1991	41.2	43.2	49.7	22.0	27.0
1992	56.8	62.0	54.2	32.2	41.4
1993	72.3	77.3	62.5	50.7	64.2
1994	79.5	80.2	63.0	58.5	66.5
(II) 1995	67.5	70.5	65.5	65.0	64.9

[a] Total liabilities/net worth.

Source: Calculated on the basis of Buenos Aires Stock Exchange data.

(3) After the implementation of the liberalization programme, there was a huge increment in Tobin's 'q'. However, the analysis of the firms' balance sheets suggests that they privileged the rebuilding of 'working capital' instead of real investment.

The strong upward trend in Tobin's '*q*' after the implementation of the financial reform is consistent with the evolution of overall investment in the economy, which grew significantly after the convertibility plan and until the Mexican shock. However, the firms' balance sheets show that their privileged item on the asset side was by far 'commercial credit', which recorded the highest growth rate followed by cash. Both phenomena are related to the recovery of financial intermediation after hyperinflation. The increase in cash reflects the recomposition in liquidity, while the increase in 'commercial credit' is due to the need to rebuild 'working capital'. This kind of inter-firm credit, which is endogenously generated by supplier/customer

Table 2.5 Argentina: short-run debt/total debt

	Total	*Tradable*	*Non-tradable*	*Privatized*	*Holdings*
1990	66.8	67.4	79.3	n.a.	41.1
1991	68.2	68.8	78.9	62.7	44.7
1992	69.2	73.0	78.7	63.3	32.7
1993	67.0	71.6	79.1	52.0	34.9
1994	62.7	68.6	73.2	48.2	27.7
(II) 1995	67.1	73.2	72.8	51.5	38.0

Source: Calculated on the basis of Buenos Aires Stock Exchange data.

Table 2.6 Argentina: dollar debt/total debt

	Total	*Tradable*	*Non-tradable*	*Privatized*	*Holdings*
1990	46.1	50.9	35.7	n.a.	23.4
1991	50.8	55.8	42.8	41.1	29.2
1992	33.6	34.8	23.3	33.6	38.4
1993	23.8	19.9	12.8	32.9	49.5
1994	24.4	24.1	17.3	32.5	32.4
(II) 1995	22.5	19.5	11.1	66.3	43.0

Source: Calculated on the basis of Buenos Aires Stock Exchange data.

relationships, constitutes the core of the informal financial system in Argentina. To a great extent, working capital was destroyed by hyperinflation, and this had very distortive consequences on the efficiency of firms. As in the case of the leverage ratio, it seems that macroeconomic instability and credit rationing in the 1980s led the firms to operate with a suboptimal amount of working capital. The rapid recovery of inter-firm credit, *pari passu* with the recovery in the availability of credit in the formal system, suggests that there is an important correlation between changes in the supply of loans in the formal market and changes in the informal one.

This leads to two conclusions. First, monetary policy can have a strong impact on the activity level via this channel. Second, the banking system's resort to credit rationing – for example, because an external shock has increased systemic risk – has a powerful impact on the productive sector by drying up commercial credit and, hence, working capital. Notice, moreover, that the lowest rates of growth correspond to the largest companies, which have probably been the least affected by credit rationing in the 1980s.

2.3 THE EVOLUTION OF THE BANKING SYSTEM UNDER FINANCIAL LIBERALIZATION

Despite massive financial distortions induced by high inflation and macroeconomic uncertainty throughout the 1980s, Argentina has not been a typically 'repressed' economy since the liberalization attempt of the late 1970s. In the 1980s interest rates were basically market-determined, credit allocation was increasingly decentralized, and the conventional goals of monetary policy were pursued mainly through indirect policy instruments. After the implementation of the CP some of the distortions remained while others were eliminated. Here the principal stylized facts are as follows.

(1) Argentina's financial system still displays an excessive number of institutions and is physically oversized when compared with the relatively reduced volume of funds it intermediates.

Demonetization has been chronic in the Argentine economy since the late 1950s and deepened dramatically during the debt crisis period. But throughout the CP's initial expansionary phase there was a sustained recovery in the monetization level. However, the level of financial intermediation (relative to the size of the Argentine economy) is still not only well below that of developed countries, but also below that of other economies on a similar level of development. Indeed, all relevant mea-

sures of liquidity as a proportion of GDP are at present quite inferior to those reached by Argentina before the financial crisis of the early 1980s.

In contrast, the number of financial institutions and their branches functioning in the domestic system is quite large, despite a steady reduction as from the early 1980s. In fact, prior to the eruption of the most recent financial crisis in late 1994, there were still 205 financial institutions. But the 1995 financial crisis accelerated the process of concentration and by August that year the number of financial institutions had fallen to 166. Because mergers and take-overs predominated (there were just nine liquidations), the number of bank branches was reduced only from 4081 to 4053.

Although the proportion of inhabitants per branch is similar to that in industrialized countries (8000), it is inconsistent with Argentina's lower degree of monetization. In effect, despite their important growth, total deposits per branch were just 11.2 million dollars in late 1994. Indeed, the use of banking services by the Argentine population is very low compared with that of developed countries, and even with that of other Latin American countries with a similar level of development. Thus, while the ratio of sight deposits over M1 (a plausible indicator of the level of 'bankarization') is less than 50 per cent in Argentina, it is 63 per cent in Brazil and about 70 per cent in Mexico and Chile.

(2) The financial crises experienced in the early 1980s and in 1995 strengthened greatly the degree of concentration prevalent in the domestic banking system.

The 1995 crisis reinforced the trend toward concentration in terms of the distribution of deposits and loans that has taken place since the 1980/81 financial crisis. Thus, while the ten largest banks in the system held 40.2 per cent of total bank deposits in 1979, they held 58.1 per cent in July 1995.

Though the degree of concentration is pushed up because of the size of public banks, high level of concentration was prevalent in the private banking sector. In July 1995, the 10 largest banks controlled 61 per cent of total deposits in private institutions and the 20 largest held 78 per cent.

The distribution of bank loans among borrowers also shows a high degree of concentration. In April 1995 the so-called 'principal debtors', that is the debtors with loans that exceeded 250 000 dollars, or who made up the list of 50 major debtors of any single financial institution, concentrated 65 per cent of total bank financing. The financial system's 10 main debtors concentrated 14 per cent of total financing (of which 86 per cent corresponded to public banks and the remaining 14 per cent to private banks).

The high concentration of both deposits and loans is the result largely of a persistently volatile and uncertain domestic financial environment characterized by pervasive imperfections and asymmetries in information, and therefore by an extremely cautious behaviour of depositors and banks. A sharp segmentation between large and small bank customers regarding loan conditions and the access to other financial services appears to be one of the most negative consequences of this predicament.[4]

(3) Public banking retains a key position in the domestic financial system.

Public banks played a decisive role in the period of import-substitution industrialization (ISI), replacing the virtually non-existent domestic capital markets as suppliers of long-term financing, but have been immersed in a deep crisis since the collapse of the ISI in the mid-1970s. The smallest provincial public banks, in particular, are probably technically bankrupt and should be privatized whenever possible, or otherwise liquidated openly.

However, public banks are still very significant in Argentina's financial system. In effect, 4 of the 10 biggest banks are public, including the 2 largest in the system. Prior to the tequila crisis, in November 1994, public banks held 38.8 per cent of total deposits and granted 41.6 per cent of total loans; in July 1995, as a result of the crisis, their share both in total deposits and loans had expanded to 40.9 per cent and 43.2 per cent respectively.

Indeed, the stability of Argentina's immature and volatile financial system, as well as the financial needs of certain activities and regions with very limited access to the private banking system, are still likely to require an active participation of a smaller but efficient public banking sector, including a few strong provincial or regional banks, a national public bank, and probably the national mortgage bank (BHN) and the foreign trade bank (BICE).

(4) Liberalization and increasing competition with other capital markets led to a swift development in universal banking, posing new threats to prudential regulation and supervision.

A permissive regulatory framework, while discouraging the development of specialized banking institutions, made a strong expansion in commercial banks possible. As a result of this policy, investment and development banks have virtually disappeared and there is only one publicly owned mortgage bank left.

Although universal banking protects financial intermediaries from increased instability of interest rates, exchange rates and inflation by

allowing wider portfolio diversification, it also poses serious threats to prudential regulation and supervision (particularly in terms of accounting and disclosure provisions), owing to the potencially risky conflicts of interest it raises.[5]

(5) The adoption of convertibility narrowed greatly the CB's powers regarding both the conduct of monetary policy and banking prudential regulation. As a result, the financial system became more vulnerable to systemic risk.

The September 1992 CB charter established the CB's autonomy from the executive power. In practice, however, the government's drastic approach to stabilization 'cum' structural reform narrowed greatly the CB's powers regarding both the conduct of monetary policy and the prudential regulation of banking.

Specifically, the new regime stipulated that the CB should maintain freely available reserves in gold and foreign currency to the equivalent of 100 per cent of its monetary base (although up to 33 per cent of reserves can be held in dollar-denominated public bonds). Consequently, the CB was only to finance the national government allowed through the purchase of treasury bonds at market prices, and to provide funding to financial institutions exclusively in situations of transitory illiquidity and only for small amounts.

Another step in the same direction was the virtual elimination of deposit insurance. Although a special limited fund was set up with the voluntary contributions of financial institutions, its meagreness in relation to the deposits in the system discouraged the banks from adhering to it. Moreover, after some institutions chose not to join the proposed scheme, the decision to participate could be interpreted as a sign of weakness by investors, not to mention the burden in terms of additional costs. In practice, therefore, the CP left the financial system with no safety net.

In fact, the absence of both a working deposit insurance scheme and a lender of last resort contributed greatly to propagating the Tequila crisis in Argentina, because it increased the financial system's vulnerability to systemic risk.[6] The authorities claimed that this approach was the proper way to deal with moral hazard problems and as a step forward in the process of financial deregulation. However, the strict application of the Law of Financial Institutions would have forced the liquidation of a large number of banks, and would have made it impossible for the authorities to handle the crisis. In fact, there were no solid theoretical arguments in favour of this stance, which also ran against most of the accumulated international experiences in the field.

In the end, the 1995 crisis forced the government to allow for a greater role of the CB as a lender of last resort, at first *de facto* and later *de jure*, broadening the CB's power to grant rediscounts and advances in both amounts and terms as long as it did not affect the backing of the monetary base specified in the Convertibility Law. The authorities were also prompted to create a compulsory deposit insurance scheme, which had a positive impact on the expectations of small investors.

(6) No matter how significant the improvement in the prudential regulatory framework has been, banking supervision is still weak in Argentina.

While the convertibility regime certainly limited the regulatory powers of the CB, the optimism prompted by the favourable international situation and the progress of structural reform in the early 1990s may have led to the somewhat light approach to supervision and enforcement of banking prudential regulation adopted in Argentina before the Tequila crisis. Thus, given that a systemic financial crisis seemed very unlikely, the monitoring and enforcement capacity of the supervisory authorities were not strengthened as required by the policy regime. With the escalation of the financial crisis, the whole monetary and financial scheme based on the Convertibility Law, the new 1992 Central Bank Charter, and the Law of Financial Institutions (with the 1992 modifications) was put to the test. Reality showed quickly that some of the basic traits of the new scheme could not handle adequately a systemic crisis. Consequently, major modifications had to be made in the regulatory framework.

To be sure, this problem had very little to do with the suitability of the framework itself. On the contrary, in 1992 the Supervisory Board of Financial Institutions was created and stricter norms concerning capital adequacy, diversification of credit risks, provisions for bad loans and minimum auditing standards were adopted.

In some cases these norms became even stricter than those defined in the first version of the Basle Accords.[7] Thus, in the case of solvency provisions, besides taking into account banks' risk-weighted assets, as established by Basle I standards, additional capital requirements were imposed according to their level of immobilizations and that of their lending interest rates (penalizing riskier strategies based on charging loan rates far higher than the market average).

As a result, in December 1994 the stated capital/assets ratio in the Argentine banking system was on average 16 per cent. This means a far lower leverage than that found in the financial systems of most other coun-

tries, developed or developing, and is a cost associated with the rigidity of the policy regime, particularly with the lack of a lender of last resort.[8]

In fact, although the high bank reserves were not sufficient, their existence prior to the crisis was important in helping to overcome it. Moreover, the CB modified reserve requirements as of August 1995 based on the experience gathered during the crisis, which suggested reducing the coefficient on checking and savings accounts and increasing requirements on term deposits (the most negatively affected by the bank run). To compensate the banks for the high level of reserves, and given that the CB's charter prevents it from remunerating them, the CB authorized reserves to be held in some (mostly public) financial instruments.

Some improvements were also made regarding the disclosure of more detailed balancesheet information by banks. With a similar purpose, the National Securities Commission (CNV) determined that bonds issued by financial institutions would have to be rated by authorized private agencies in order to go public. The CNV also determined that all deposits made by the recently established private pension funds could go only to banks rated by these agencies.

However, in late 1994, more than three years after the CB became independent, despite the improvements made in the prudential regulatory framework, the supervisory authorities were not yet ready to perform full-scale, regular inspections of financial institutions according to modern international standards.[9] The crisis showed that a significant number of banks were not fulfilling even the most basic prudential regulations, nor were they reporting accurately their actual situation to the CB.

Indeed, some analysts have suggested that stated capital is overestimated, because an important fraction is likely to be eroded by provisions and write-offs of bad loans currently on the books of the banks.[10]

(7) The memories of protracted high inflation and the more recent hyperinflation episodes imposed severe constraints on the performance of the financial system.

In effect, past history matters a great deal in present performance. This is reflected in the following four issues: monetary hysteresis, dollarization, preference for flexibility and portfolio diversification.

After five years of increasing price stability, demand for domestic financial assets and other banking services in Argentina is still significantly lower than before the high inflation period, and much lower than in most other countries with comparable inflation levels. This shows the existence of monetary hysteresis. At the same time, since the beginning of convertibility the banking system has become even more

dollarized than in the past. Both developments tend to accentuate the vulnerability of the financial system to macroeconomic shocks, and particularly to volatile capital flows.[11]

Other evidence of the inadequate development of the financial system is the low average term-maturity of deposits. Although there has been a minor improvement in this regard, this average is slightly longer than 30 days. Depositors are still strongly risk-averse, and consequently choose to keep very flexible financial positions.

This extreme preference for flexibility seriously impairs the maturity-transformation role of financial intermediaries. The exceptionally high spreads prevalent in the domestic system partly reflect this situation. Moreover, most of the banks' loan portfolios are also extremely short-term. Overdraft facilities with an average maturity of 1.2 days account for 25.3 per cent of total credit; secured loans with an average maturity of 99 days are equivalent to 33.5 per cent of the total; and personal loans with an average maturity of 208 days represent 13 per cent of the total. On the other hand, medium- and long-term financing is basically channelled through mortgages, which account for just 19.3 per cent of total credit and have an average maturity of only 1470 days, and liens, which represent 8.9 per cent of the total and have an average maturity of 449 days.

Last but not least, the massive capital flight caused by the turbulent macroeconomic environment of the 1980s had a permanent impact on the financial behaviour of domestic agents, leading to a much higher international diversification of domestic portfolios. Thus, it *de facto* integrated domestic financial markets with international ones, drastically limiting the room for autonomy in monetary policy by strongly increasing the sensitivity of portfolio choices to differentials in expected returns between domestic and foreign assets.

(8) Exchange rate overvaluation plus a swift financial liberalization led to overindebtedness and financial vulnerability.

Both the expansion in absorption and the external deficit were primarily financed by massive capital inflows, which were channelled through domestic credit and capital markets, therefore contributing to a fast buildup of private and public indebtedness.

As was the case with many other attempts at rapid financial liberalization, most notably (but not only) the Southern Cone experiences in the late 1970s, the mix of aggressive bank lending with lax supervision once again resulted in a dangerous accumulation of bad loans and a growing fragility in the financial system. This process started well before the tequila crisis.

In fact, the incidence of non-performing loans in total credit for the whole convertibility period presents wide discrepancies between different types of institutions. National public banks registered a considerable reduction in bad loans up until the end of 1994, partly as a result of the restructuring process undertaken by these institutions. Nevertheless, in December 1994 bad loans still amounted to 21.9 per cent of the total. Provincial and municipal public banks were in an even more delicate situation; and the decrease in their bad loans was quite modest, so that in December 1994 these stood at 37.6 per cent. Stated problem loans in private banking, though much lower than in public institutions, showed a slight tendency to increase. Official information on non-performing loans net of provisions relative to net worth offers a fairly similar picture (Table 2.8).

These figures, however, probably conceal the full incidence of problem loans in bank portfolios. For one thing, the information for the period beginning in June 1994 is not strictly comparable with the previous one, because the CB changed the rating of debtors as from that month. For another, there are strong presumptions that bank books systematically underestimated the incidence of bad loans.

In effect, even allowing for the severity of the recent crisis, the incidence of problem loans could not have reached its 1996 levels in just twelve months. Moreover, credit costs for the pre-crisis period strongly suggest a pre-crisis buildup in problem loans, and impressions gained through informal discussions with individual banks point to the same conclusion (Corrigan, 1996).

(9) High operational unit costs and significant credit risks lie behind the simultaneous wide spreads and low profits.

The fact that country risk remained at a high level is one of the key variables explaining the persistence of an appreciable spread between domestic and international interest rates. On the contrary, convertibility has been truly effective in producing a marked fall in expected devaluation.[12] In any case, the Tequila crisis interrupted the declining trend in domestic borrowing rates and prompted a substantial rise both in peso and dollar rates, which extended throughout the first half of 1995.

Borrowing rates exceeding international ones, and intermediation spreads that, though declining, remained extremely large, result in excessively high domestic lending rates, especially in real terms (Table 2.7).[13]

Wide intermediation spreads basically originate from two factors: on the one hand, the high operational unit costs associated with the physical oversize of the financial system, relative to the low level of monetization

Table 2.7 Argentina: interest rates and financial spread annual interest rates on 30-day deposits and loans (%)

		Nominal interest rates		*Real interest rates*		
		Lending (1)	*Borrowing (2)*	*Lending (col. 1/CPI)*	*Borrowing (col. 2/CPI)*	*Financial spread*
1991	March	196.07	135.14	−15.37	−32.79	60.93
1991	December	85.76	52.97	3.27	−16.02	32.79
1992	December	32.12	11.62	11.14	−6.05	20.50
1993	December	24.65	10.17	15.89	2.23	14.48
1994	December	30.00	9.75	25.41	7.15	20.25
1995	January	35.00	10.83	30.23	8.20	24.17
	February	45.00	11.76	39.88	9.11	33.24
	March	65.00	19.51	59.17	16.68	45.49
	April	55.00	19.08	49.53	16.26	35.92
	May	45.00	15.85	39.88	13.11	29.15
	June	35.00	10.81	30.23	8.18	24.19
	July	30.00	9.65	25.41	7.05	20.35

Source: Calculated based on data from BCRA and Carta Económica.

and bankarization of the economy; on the other, the significant credit risks connected with the heavy burden of bad loans in bank portfolios.[14]

Precisely because of the same factors, and despite the above-mentioned wide margins, profitability in the bank system is astonishingly low. The rate of return on equity (total net revenues as a proportion of net worth) showed some improvement from the beginning of convertibility, as a corollary of the growth in financial intermediation, the increment in revenues from service commissions, and the important capital gains accrued by the financial institutions from their holdings of public and private bonds. However, starting from the Mexican crisis in December 1994, this indicator worsened again. Falling deposits, the shrinkage of net income from services, the increment in bad loans, and the capital losses derived from the fall in the prices of securities were all causes of this deterioration.

2.4 CONCLUSIONS

The liberalization process led to significant structural transformations in the capital markets and in the firms' balance sheets. From the 'macro'

Table 2.8 Argentina: non-performing loans net of provisions as a proportion of net worth weighted averages (%)

Type of institutions	*December 1991*	*December 1992*	*December 1993*	*December 1994*[a]	*April 1995*[a]
National public banks	241.27	48.43	30.92	29.87	34.18
Provincial and municipal public banks	109.23	87.24	101.07	140.19	168.23
Private banks in the federal capital	6.35	11.18	12.02	13.95	16.70
Foreign banks	6.37	13.26	19.76	16.15	14.19
Private banks in the interior	17.69	30.64	29.54	32.45	39.99
Total in the system	113.18	39.72	31.75	33.78	38.58

[a] Includes loans in categories 3 to 5 of the new loan rating adopted in June 1994.

Source: Calculated based on data from 'Indicadores del Sistema Financiero', BCRA.

financial point of view, the most positive initial developments were the increase in financial deepening, the reversal in capital flight and the lifting of the foreign credit rationing faced by Argentina in the 1980s. From the 'micro' point of view the most relevant facts were the recomposition of the credit channels between banks and firms and the recovery of inter-firm credit. This enabled the firms to increase their leverage and to rebuild their working capital, which had remained suboptimal following hyperinflation.

However, some developments are giving rise to a concern about the future evolution of financial markets. First, there was financial deepening but, at the same time, dollarization also 'deepened'. On the one hand, the private sector greatly increased its foreign indebtedness. On the other, most of the newly generated domestic credit is denominated in dollars. Second, the quality of the credit generated by the Argentine financial markets is still low. In particular, there was no significant reversal in the term maturity of the assets and/or liabilities generated by the financial system. Besides, because only large firms have access to foreign credit markets, small and medium-sized companies still face a tight credit rationing which constrains their performance and depresses their investment.

The banking crisis triggered by the late 1994 Mexican devaluation made evident not only the fragility of the domestic banking system, but also the rigidity of the current convertibility regime and the lack of a suitable safety net with which to confront a run on deposits. In fact, with the crisis already under way, the government was forced to make urgent legal modifications to set a limited safety net that is consistent with the maintenance of convertibility.

The most important of these changes was the restitution of the CB function as lender of last resort, though on a very modest scale. Another significant step was the CB's recovery of the power to deal with problem banks according to a vast menu of normative alternatives to protect the investors' deposits, thus making it possible to limit the number of liquidations. Although real possibilities of coverage were virtually nil initially, given the meagerness of the Guarantee Fund, the restoration of a partial deposit insurance positively affected the confidence of small investors.[15]

The financial crisis also generated major changes in the structure of the financial system. Wholesale institutions and the small provincial banks, both public and private, were hardest hit. This led to liquidations in some cases, mergers in others, or takeovers by the more solid institutions in most, resulting in a reduction in the number of entities and, hence, a rise in banking concentration. This process, which is far from finished, will most likely deepen the segmentation of the financial market and result in further

restrictions on the already insufficient credit support received by the small and medium-sized firms.

At any rate, although some anti-crisis regulatory instruments were recovered and utilized with a certain degree of efficacy, it must be pointed out that overcoming the crisis was only possible thanks to the large volume of external resources obtained principally from the multilateral financial institutions. With these, the government was able to improve expectations on the maintenance of convertibility, the fiscal balance and the soundness of the financial system.

All this tends to support the view that the current economic scheme is extremely dependent on capital movements, and therefore quite vulnerable in the face of external shocks. This has an upward impact on systemic risk, leading to higher intermediation costs in the banking system than under more flexible monetary regimes.

Moreover, even if the financial crisis had significantly subsided by the end of 1995, certain indicators suggest that the system is currently not all that less fragile than before the crisis.

In the first place, according to the increasing weight of bad loans in bank portfolios, the solvency of many institutions has further deteriorated because of the sharp recession induced by the crisis. In the second place, although a deposit insurance regime is in effect, the Guarantee Fund counts on an almost insignificant volume of resources, which makes the efficacy of the instrument pretty doubtful in case it needs to be utilized. In the third place, the monetary authority still has very limited resources with which to fulfill its role as lender of last resort. Finally, the possibility of assistance from the multilateral financial organizations is now very limited, given the profuse use of these resources during the recent crisis.

Therefore, within the tight limits imposed by the convertibility regime, a less vulnerable financial system is likely to require not only very high bank reserves and a much stricter regulatory framework, but also fewer and bigger institutions and a larger participation of foreign banks.[16] There are some signs that the financial system may already be heading in this direction. However, the relevant question of how to ensure that this system is also consistent with a sustained and equitable economic growth remains open.

The Argentinian experience also raises some interesting theoretical questions. The first one involves the modelling of risk. Is the traditional distinction between diversifiable and systemic risk suitable for a capital market like Argentina's? There are two important issues regarding this point. On the one hand, the thinness of the stock market makes domestic diversification difficult. On the other hand, there is not only a 'macro'

systemic risk associated with the economic cycle but also a 'macro' systemic risk associated with devaluation, financial crisis and default in a highly dollarized economy.

Second, it is necessary to have a better understanding of how the changes in the money supply originating in the private sector's portfolio decisions affect the financial position of firms. Under convertibility, the changes in the demand for domestically generated assets affect the availability of credit. How does this affect the firms' working capital, their net worth, their cost of capital (the interest rate spread between internal and external finance) and the level of financial fragility?

Third, it is important to consider what the optimal capital structure is for a firm working in an environment characterized by severe imperfections in capital markets (that is, the existence of segmentation, the lack of availability of long-term financing, and the extent of prevalence of dollarization).

Fourth, special attention should be paid to the characteristics of prudential regulation in a dollarized financial system characterized by recurrent uncertainty and volatility triggered by external shocks. In such a context, it is extremely relevant to assess the optimal trade-off between the need to have a safety net for the system (via lender-of-last-resort activities and deposit insurance) and moral hazard in banking.

Finally, thought needs to be given to what kind of indicators should be used by the authorities to distinguish between liquidity and solvency problems when a macroeconomic external shock takes place.

Notes

1. This chapter is a revised version of a paper presented at the final meeting of the project on 'Financial Liberalization in Developing Countries', supported by IDRC (Canada), held at Bilkent University, Ankara, June 1996. We are grateful for the comments received there. Previous research together with L. Bleger, M. Damill and D. Kampel has greatly contributed to this chapter. Remaining mistakes are, of course, exclusively our own.
2. See Diaz-Alejandro (1985).
3. The indicators used in the analysis have been calculated on the basis of balance sheet data from a sample of 68 firms quoted on the Buenos Aires Stock Exchange (BASE). These companies are the largest in Argentina and their capitalization is equivalent to 99 per cent of total market capitalization. For the purpose of analysis the sample was organized into four groups of firms. The first one comprises 38 companies whose main activity is the production and sale of tradable goods. The second group consists of 19 that largely produce and sell non-tradables. A third group includes 4 holding companies, which, because of the diversity of their activities, cannot be

neatly classified as either tradable nor non-tradable producers. The fourth group is constituted by the 7 privatized firms that quote on the BASE.

4. See Stiglitz (1993) on information problems in underdeveloped financial markets.
5. On this issue, see Dewatripont and Tirole (1994).
6. For a theoretical analysis of safety nets in financial systems, see Dewatripont and Tirole (1994).
7. For a detailed description and critical assessment of the Basle Accords, see Davis (1995) and Dewatripond and Tirole (1994).
8. After the Tequila crisis, the CB has even begun to take the necessary steps to include some of the more recent Basle proposals regarding interest rate, liquidity and other market risks in capital requirements.
9. In fact, the CB had only recently begun to consider the implementation of new inspection procedures based on the CAMEL standards. The aim of the programme was initially to rate all financial institutions according to the CAMEL system, and then to take this rating as the basis for capital and other prudential requirements.
10. See Corrigan (1996). From this fact, Corrigan argues that a banking crisis was probably in the making in Argentina even before the tequila effect.
11. Calvo (1995) stresses the vulnerability of the domestic financial situation to volatile capital flows as an important factor behind the recent collapse in Mexico.
12. We take the difference between the IRR of Bonex (a dollar-denominated public bond) and the LIBOR rate as proxy for country risk, and the spread between the average rate of peso deposits and the IRR of Bonex as proxy for expected devaluation.
13. It is worth noting, however, that the cost of credit exhibits strong disparities linked, among other things, to the size and geographical location of borrowers. The most adversely affected are the small and medium-sized firms excluded from international financial markets. The large economic groups, of course, are far less affected because of their access to foreign credit and, to a lesser extent, to the local capital market.
14. Of course, exceedingly high real lending rates have themselves lately developed into one of the causes of the growing weight of problem loans.
15. It is worth stressing the already-mentioned regulatory mechanism of borrowing rates, designed to limit the moral hazard inherent in any deposit guarantee regime. See on this issue Glaessner and Mas (1995) and Dewatripont and Tirole (1994).
16. In fact, these are some of the recommendations proposed in Calvo (1995).

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3 India

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3.1 INTRODUCTION

In 1991, the Indian government initiated a comprehensive market-oriented reform programme. At the core of the programme was a phased deregulation of the financial sector, along with reforms of trade and industrial policies. Important elements of the financial liberalization programme were a lifting of several interest rate ceilings in both credit and bond markets, an easing of requirements that had made it mandatory for banks to hold a part of their portfolio in non-interest-bearing reserves and low-yielding government securities, a partial dismantling of barriers to entry into the banking sector and greater freedom given to banks to close unviable branches in rural and semi-urban areas. Along with the liberalization measures was a move to introduce a regulatory mechanism that could ensure the safety and solvency of the financial sector in the deregulated environment.

This chapter has as its purpose to analyse the process of financial liberalization and the regulation of the financial sector in India for the period from 1991/92 to 1994/95.[2] It undertakes an examination of the changes in major sectors (banks and development finance institutions) and key financial markets (stock, money and government securities).[3] It also analyses two specific issues in the reform process: first, the regulatory regime pertaining to banks and development finance institutions; and second, the link between the financial liberalization process and the general macroeconomic environment within which it occurs.

This chapter is structured as follows. In Section 3.2, we discuss the motivation for the financial sector reforms. In Section 3.3 we provide an overview of the financial intermediation process in India for the period from 1971/72 to 1992/93, using data drawn from the flow of funds statements published by the Reserve Bank of India (RBI) with a view to identifying salient features of the financial intermediation process in India during the pre-reform period and the years immediately following the reforms. In this section, we analyse the effects of the reforms on the two major sets of financial intermediaries in India – commercial banks and other financial institutions. We also trace the evolution of financial markets during the reforms. In Section 3.4 we describe the

macroeconomic environment in which the reforms took place and the effects, if any, that financial deregulation might have had on macroeconomic stability. Finally, in Section 3.5, we provide an overall assessment of the financial liberalization process.

3.2 REPRESSION AND REFORM IN THE INDIAN FINANCIAL SECTOR, 1969–95

Background to the Reforms

Prior to 1969, the Indian banking sector operated in a more or less deregulated environment with all commercial banks (except the State Bank of India, SBOI) being privately owned. The State Bank of India, which was earlier named the Imperial Bank, and its associate banks came under RBI supervision in 1946. 'Social control' of the banking sector effectively began in July 1969, when 14 of the largest Indian scheduled commercial banks were nationalized. The nationalization of these banks, when combined with SBOI and its associate banks, meant that 22 of the largest banks accounting for 86 per cent of the deposits had become public sector banks (Krishnaswamy, *et al.*, 1987). In April 1980, six more banks were nationalized, bringing the share of public sector banks' deposits to 92 per cent. The ostensible objective of the nationalization was the need for the government of India to 'control the heights of the economy and to meet progressively ... the needs of development of the economy in conformity with national policy and objectives'.[4] With resource mobilization a key objective of the Indian planning process, the newly nationalized banks were 'asked' to mobilize deposits on a massive scale by setting up branches in rural and semi-urban areas. At the same time, with the adoption of the Fourth Five Year Plan in 1969, a strategy for agrarian development that put great emphasis on technological modernization was initiated (Chakravarty 1987).

One important element in the above strategy was the provision of adequate credit to the agricultural sector. Furthermore, there was renewed emphasis on poverty alleviation and employment generation in the planning process during this period. This led to intense pressure on the public sector banks by the government of India to lend to the priority sectors (covering agriculture and allied activities, small-scale industry, retail trade, transport operators, professionals and craftsmen). By March 1979, the 'priority sector lending requirements' (as they came to be known) stipulated that 33 per cent of each bank's total credit should be advanced to

the priority sector, with not less than 16 per cent going to agriculture. This was later raised to 40 per cent (where it has stayed ever since), with a further stipulation that half the advances to the agricultural sector should consist of loans to small and marginal farmers. During this period, the banking sector was protected from competition by significant barriers to entry imposed on both foreign and private domestic banks.

The other financial institutions have had a longer history of public ownership, with existing insurance companies being nationalized in 1956 to form the Life Insurance Corporation of India (LIC). Financial institutions such as the Unit Trust of India (UTI, which is a publicly owned mutual fund) and the Industrial Development Bank of India (IDBI) were set up by RBI[5] in collaboration with other financial institutions. UTI was established to promote the stock market (the goal of UTI was to invest savings mobilized from households in corporate stocks and bonds), whereas IDBI was to provide direct and indirect long-term finance to firms in the industrial sector. Term loans to the industrial sector were also provided by the Industrial Finance Corporation of India (IFCI) and the Industrial Credit and Investment Corporation of India (ICICI).

It should be noted that the policies of financial repression began in the Indian context with the bank nationalization episode of 1969. However, while the need for social control of the banking sector provided the initial rationale for the policies of financial repression, the subsequent intensification of these policies over the 1970s and 1980s was due in great part to the government's increasing need to use the banking sector to finance its deficits. The fiscal deficit/GDP ratio increased steadily during this period, from 3.56 per cent in the period from 1971/72 to 1975/76 to 8.29 per cent in the years from 1986/87 to 1990/91. The way the government used the banking sector as a captive source of funds was by means of the statutory liquidity ratio (SLR). The SLR is the proportion of net demand and time deposits that banks have to maintain in India in cash, gold and approved government and semi-government securities. Originally, the SLR requirement was intended as an instrument of monetary policy so as to prevent banks from offsetting the effects of changes in reserve requirements by liquidating their holdings of government securities. However, over the years, the SLR 'has provided an expanding captive market for government securities and hence served as a means of allocating a larger share of banks' resources to government' (Chakravarty Committee 1985, p. 254). The SLR also performed another important role: that of allocating cheap funds to development finance institutions whose bonds were a part of approved securities. The SLR requirement, which was 28 per cent in 1970/71, stood at 38.5 per cent in 1989/90.

To partially neutralize the effects of the increase in the monetary base brought about by deficit financing, there was a steady increase in the Cash Reserve Ratio (CRR) from 7 per cent in 1973/74 to 15 per cent in 1989/90. This meant a larger proportion of bank funds were locked into non-interest-bearing bank reserves. At the same time, to keep the cost of borrowing low for itself, the government systematically suppressed government securities markets (and money) markets during this period. As a result, open market operations, which were important instruments of monetary policy in the pre-repression period, lost their effectiveness as policy tools.

The effects of financial repression policies quite clearly had a negative effect on the financial sector: markets were heavily segmented and the underdeveloped nature of secondary markets inhibited competitive pricing of assets (Rangarajan 1994); the presence of non-price allocation mechanisms led to an inefficient use of credit; the several restrictions on banks' uses of funds and the imposition of branch licensing requirements had a significant negative impact on bank profitability; and the restrictions on bank entry and the dominance of public sector banks greatly inhibited competition and efficiency in the banking sector.

The Strategy of Financial Sector Reform

The impetus to reforms in the financial sector came with the submission of three influential reports by the Chakravarty Committee in 1985, the Vaghul Committee in 1987 and the Narasimham Committee in 1991. The first committee suggested ways of activating the treasury bills market so that open market operations could gradually become the dominant instrument of monetary policy. The second committee recommended a phased decontrol and development of money markets and the gradual integration of these markets with other key short-term markets such as the treasury bills market. The recommendations of the Narasimham Committee provided the blueprint of the reforms that followed in the post-1991 period, especially with regard to banks and other financial institutions.

Since the mid 1980s, RBI has implemented, in phases, several key recommendations of the Chakravarty and Vaghul committees. In the government securities markets, a scheme for 182 days treasury bills was introduced in November 1986, initially on a monthly auction basis and without any rediscounting facility with the RBI. The RBI also took several steps to develop the money markets. In April 1988, the RBI instituted the Discount and Finance House of India (DFHI), to provide liquidity to the money markets. In May 1989, as a further step towards the liberalization

of the money markets, the ceiling on the call money rate was withdrawn. In 1988/89, RBI also introduced commercial paper and certificates of deposit as new short-term instruments in the Indian financial market. Consequently, by the late 1980s, there was significant deregulation and development of the short-term segment of the financial markets in India, with little progress in the deregulation of credit and capital markets.

More radical reforms had to wait till the adoption of the structural adjustment cum stabilization program by the Indian government in mid-1991. With the adoption of the reform package, two important pre-conditions for financial sector reform were fulfilled. First, with a sharp reduction in the central government's fiscal deficit in the first year of the reforms, there was less of a need to use the banking sector as a captive source of funds. Second, the implementation of far-reaching reforms in trade and industrial policies meant that the allocation of resources was increasingly market-driven. This implied that for the reforms in the real sector to succeed, trade and industrial policy reforms had to be supported by reforms in the financial sector so that scarce investible funds could go to the most productive use.

3.3 STRUCTURE AND EVOLUTION OF THE INDIAN FINANCIAL SECTOR

There are two major sets of financial institutions in the Indian economy – commercial banks and other financial institutions. Other financial institutions in turn can be classified into three groups: (1) all-India development banks (or development finance institutions); (2) the state financial institutions (SFIs); and (3) the investment institutions, consisting of insurance companies and mutual funds (the most important being the Unit Trust of India (UTI)). The development finance institutions (DFIs) specialize in the provision of long-term finance to agricultural and industrial sectors. The most important of the DFIs are the Industrial Development Bank of India (IDBI), the Industrial Credit and Investment Corporation of India (ICICI), the Industrial Finance Corporation of India (IFCI) and the Industrial Reconstruction Bank of India (IRBI), which primarily provide long-term finance to the industrial sector. Along with the above are two other DFIs, the Small Industries Development Bank of India (SIDBI) and the National Bank for Agriculture and Rural Development (NABARD), which specialize in catering to the needs of the small-scale and agricultural sectors respectively

All the major institutions in the above three categories, except ICICI, are government-owned. All these institutions provide assistance to firms

Table 3.1 India: selected macroeconomic indicators, 1981/82–1994/95

Year	*1981/82–85/86*	*1986/87–90/91*	*1991/92*	*1992/93*	*1993/94*	*1994/95*
Output						
Growth rates of:						
GDP	5.0	6.3	0.8	5.1	5.0	6.3
GDP, agriculture	2.7	4.6	–2.6	6.6	3.4	5.1
GDP, manufacturing	8.1	7.2	–3.7	4.1	4.3	9.0
GDP, finance[a]	6.1	7.6	10.5	3.0	8.5	4.3
Prices						
Inflation	6.8	7.8	13.7	10.1	8.4	10.4
Savings and investment						
As percentage of GDP:						
Domestic savings	19.1	21.4	22.8	21.8	21.4	24.4
Real investment	22.6	24.0	20.4	21.8	20.2	n.a.
Monetary variables						
Growth rates of:						
M3	16.4	17.6	18.5	16.4	18.2	19.7
Monetary base	14.4	18.4	13.4	11.5	24.9	22.4
Net RBI claims on govt	19.1	18.0	5.8	4.7	0.9	2.2
Foreign currency assets	2.4	19.7	136.0	20.2	127.1	45.3
Real bank credit	10.4	50.6	–5.1	10.0	–0.2	11.4
Fiscal policy						
CPSD[b] (as percentage of GDP)	–9.8	–11.9	–10.6	–10.2	–11.7	–12.2
Financing (%):						
Internal borrowing	76.5	75.1	79.8	74.1	82.1	89.3
External borrowing	8.3	7.3	9.4	8.4	5.6	4.9
Monetization	15.2	17.6	10.8	17.5	12.4	5.8
As percentage of GDP:						
Fiscal deficit	–6.8	–8.4	–5.9	–5.7	–7.5	–6.5
Primary deficit	–4.3	–4.6	–1.6	–1.3	–2.9	–1.8
Seigniorage	1.8	2.2	1.9	1.2	n.a.	n.a

Table 3.1 *(continued)*

Year	*1981/82–85/86*	*1986/87–90/91*	*1991/92*	*1992/93*	*1993/94*	*1994/95*
External debt						
Debt/GNP	16.9[b]	24.1	34.0	37.5	37.3	n.a.
Debt service/Exports	17.7[b]	29.9	30.6	29.4	28.4	n.a.
Short term/Total debt	7.8[b]	10.4	8.4	7.0	4.0	n.a.

n.a. = not available.

[a] Combined public sector deficit (includes public sector enterprises).
[b] Averages for years 1982/83–1985/86.

Sources: Ministry of Finance, *Economic Survey*, various issues; RBI, *Report on Currency and Finance*, various issues; World Bank, *World Debt Tables*, various issues; Easterly *et al.* (1994) and Buiter and Patel (1993).

either by providing loans or by subscribing to shares and debentures issued by them. They also underwrite new issues and provide guarantees for term loans and deferred payments to enable firms to tap into other sources of credit.

To examine the relative importance of commercial banks and other financial institutions in the intermediation of funds, we present the distribution of assets across major financial intermediaries at four different points of time in Table 3.2. It is clear from this table that the pre-reform period, 1971–91, can be divided into two distinct sub-periods. The first sub-period, 1971–81, was the period of growth for commercial banks, whose share in total assets of financial intermediaries increased sharply from 26.4 per cent in 1971 to 42.9 per cent in 1981. The second sub-period, 1981–91, is the period of growth for financial institutions, whose share in total assets increased from 16 per cent in 1981 to 25.6 per cent in 1991. The most noticeable growth was that of the term-lending institutions, whose share in total assets increased from 5.9 per cent in 1981 to 10.9 per cent in 1991. Interestingly, this trend has continued in the post-reform period, with the share of commercial banks in total assets falling by 2 percentage points in 1991–93. On the other hand, the share of financial institutions has increased by 1.3 percentage points in the same period.

Table 3.2 India: distribution of assets, banking and financial institutions (%)

Assets (as at end-March)	*1971*	*1981*	*1991*	*1993*
Banking	66.0	84.0	74.4	73.1
of which:				
RBI	21.0	24.4	25.8	26.8
Commercial banks	26.4	42.9	46.5	44.3
Financial institutions	34.0	16.0	25.6	26.9
of which:				
Term-lending	n.a.	5.9	10.9	11.0
IDBI	n.a.	3.0	4.7	4.6
ICICI	n.a.	0.7	1.5	1.8
IFCI	n.a.	0.6	1.2	1.4
IRBI	n.a.	0.1	0.2	0.2
State financial institutions	n.a.	1.7	2.1	1.9
Investment institutions	n.a.	8.0	12.2	13.6
Insurance	n.a.	7.7	7.4	8.5
UTI	n.a.	0.5	4.8	6.2
Other institutions	n.a.	0.2	0.4	0.4

Sources: RBI (1985) and RBI, *Report on Trend and Progress in Banking 1993/94*.

An Overview of the Financial Intermediation Process

Analysis of the economy-wide flow of funds over the period 1971/72 to 1992/93[6] indicates that the two surplus sectors (net lenders) were the household and the rest of the world sectors, while the two deficit sectors (net borrowers) were the government and the private corporate sectors (Table 3.3). The surpluses of household and the rest of the world sectors increased steadily over time, as did the deficits of the government and private corporate sector. With the government sector reducing its dependence on external funds, there was some indication of a change in this trend after 1991/92.

Among the three non-financial sectors, the government was the largest borrower, as indicated by its share in total sources of funds (Table 3.4). Again, there is an indication of a reversal of this trend after the 1991 reforms. Not surprisingly, although the importance of corporate securities was steadily increasing, government securities were the second most important financial instruments in total sources (after loans and advances). The role of trade credit in mobilizing funds decreased steadily over the

Table 3.3 India: financial surplus (+) or deficit (–) by sector (% of GDP)

	1971/72–75/76	*1976/77–80/81*	*1981/82–85/86*	*1986/87–90/91*	*1991/92*	*1992/93*
Private corporate business	–0.9	–1.4	–2.4	–2.2	–2.7	–5.3
Government	–4.0	–5.8	–8.5	–9.9	–8.3	–6.5
Household	4.3	6.1	6.9	8.0	9.2	–7.8
Rest of the world	0.2	0.6	1.5	2.6	0.4	1.9

Source: Flow of funds accounts, *RBI Bulletin*, various issues.

Table 3.4 India: non-financial sectors' sources of external funds (%)

	1971/72–75/76	*1976/77–80/81*	*1981/82–85/86*	*1986/87–90/91*	*1991/92*	*1992/93*
Distribution of funds by sector raising funds:						
Private corporate business	17.5	16.1	21.1	17.8	31.7	37.0
Government	64.7	65.5	63.6	67.2	59.8	49.2
Household	17.8	18.4	15.3	15.0	8.5	13.7
Distribution of funds by source:						
Currency and deposits	1.3	4.4	5.9	10.7	9.1	8.2
Government securities	31.1	24.6	23.4	25.7	16.6	14.4
Corporate securities	1.3	2.3	4.3	4.9	8.8	11.6
OFI securities	0.0	0.0	0.0	0.0	0.0	0.0
Loans and advances	41.3	40.6	37.4	35.7	37.8	46.8
Trade debit or credit	10.1	6.1	4.5	1.2	–0.7	–0.7
Other liabilities	14.8	22.1	24.5	21.8	28.3	19.7

Source: Flow of funds accounts, *RBI Bulletin*, various issues.

Table 3.5 India: uses of funds by non-financial sectors (%)

	1971/72–75/76	*1976/77–80/81*	*1981/82–85/86*	*1986/87–90/91*	*1991/92*	*1992/93*
Distribution of funds by sector investing funds:						
Private corporate business	5.1	5.2	7.6	7.0	17.0	9.6
Government	18.1	15.4	12.9	13.8	10.0	16.5
Household	76.8	79.5	79.5	79.1	73.0	73.9
Distribution of funds by uses:						
Currency and deposits	49.2	26.4	42.7	45.0	45.8	40.0
Government securities	–1.2	–0.1	0.4	0.3	0.5	0.6
Corporate securities	0.3	1.4	3.5	1.7	4.3	5.9
OFI securities	0.6	0.6	1.9	3.7	11.9	7.6
Loans and advances	14.6	25.5	26.9	7.7	11.4	15.1
Trade debit or credit	6.3	6.3	6.8	3.0	–1.1	0.3
Other assets	30.1	39.9	17.8	38.6	27.3	30.5

Source: Flow of funds accounts, *RBI Bulletin*, various issues.

years. While the household sector was the largest lender, its share in total uses of funds showed a surprising downturn in the first two years of the nineties (Table 3.5). While currency and deposits are the most preferred financial assets for the non-financial sector to invest in, the share of corporate and other financial institutions' (OFI) securities in total uses of funds was increasing steadily over the years.

To undertake a more detailed analysis of changes in corporate financing brought about by financial sector reform, we use a data set compiled by the Reserve Bank of India. This data set refers to a sample of private corporate firms with a paid-up capital of over Rs 10 million and covers the period from 1986/87 to 1992/93 (Table 3.6). The size of this sample increases marginally over the period. The firms in the sample account for well over 40 per cent of all non-financial firms in the private corporate sector in terms of paid-up capital.

From Table 3.6 the following important observations about the 1986/87 period emerge:

(1) Internal sources were not the dominant source of finance over the period. In fact, generally speaking, their importance was decreasing and the decrease was rather dramatic after 1990/91, the year in which financial sector reforms were initiated.
(2) Borrowings from banks, which are predominantly in short-term credits, generally accounted for 8 to 11 per cent of the total except for the year 1987/88. This share rose marginally after 1990/91.
(3) Borrowings from financial institutions (both Indian and Foreign) are generally term loans. Their share was rising and in 1992/93 it stood at 15.4 per cent.
(4) The share of borrowings from others (which include inter-corporate loans and deposits from the public) varied a great deal over the years, and ranged between 7.8 and 19.3 per cent.
(5) Trade credit and other current liabilities were always important sources of finance.
(6) The importance of shares as a source of finance increased over the years, with a dramatic rise from 7.8 per cent in 1991/92 to 22.9 per cent in 1992/93.

Clearly, the most striking feature was the dramatic rise in funds channelled through the stock market. Between 1991/92 and 1992/93 there was a shift from internal sources, borrowings from others and trade and other current liabilities in favour of shares. This was possible because of the presence of fairly well-developed stock markets and measures taken to reform rules and

Table 3.6 India: financing of large, non-financial enterprises in the private sector[a]

	1986/87	*1987/88*	*1989/90*	*1990/91*	*1991/92*	*1992/93*
No. of firms	621	621	645	648	650	650
(1) Internal sources/retentions	38.8	40.6	33.2	39.2	29.9	26.3
(2) External sources	61.2	59.4	66.8	60.8	70.1	73.7
(a) Shares	3.3	7.3	7.3	10.4	7.8	22.9
(b) Capital receipts	0.3	0.4	0.2	0.2	0.2	0.1
(c) Borrowings from banks	11.0	4.7	8.8	8.0	9.0	10.8
(d) Borrowings from financial institutions	9.4	9.4	8.4	12.9	14.6	15.4
(e) Borrowings from govt. and semi-govt. bodies	0.5	0.7	1.2	1.3	1.5	1.0
(f) Borrowings from others	19.3	16.6	20.9	7.8	15.7	9.5
(h) Trade and other current liabilities	17.4	20.2	19.9	18.9	21.3	14.0
(i) Misc. non-current liabilities	neg.	neg.	0.2	neg.	neg.	neg
Total	46 170	47 411	115 600	131 590	191 390	218 460

neg. = negligible.

[a] All figures in the table are percentages except the totals, which are in Rs million.

Source: *RBI Bulletin*, various issues.

procedures governing the stock markets and, especially, the primary markets. We discuss these reforms below in the subsection on the stock market.

We have found that while the government and the household sector were the largest borrowers and lenders in the real sector for the period from 1971/72 to 1991/92, there are indications that the relative importance of these two sectors in their role as sources and users of funds may be declining with the onset of the reforms. We now turn to an examination of the state and level of development of the two groups of financial intermediaries – commercial banks and other financial intermediaries – at the beginning of the reform process and the implications of the reforms for the evolution of these two groups in the future.

Commercial Banks

After 1969, there was significant growth in the commercial banking system, both in its geographical coverage and in the amount of resources mobilized. All indicators of bank progress show a distinct improvement during 1969–93. Perhaps the most revealing indicator of the development of the commercial banking sector in India is the increase in deposits as a percentage of national income, from 15.3 per cent in 1969 to 44.7 per cent in 1993. This has been arguably the key factor behind India's impressive performance in the mobilization of domestic savings. India's savings rate is one of the highest among countries at a similar stage of economic development (Joshi and Little 1994).

There have been two reasons behind the high levels of deposits mobilized by the banking sector. First, there has been a phenomenal increase in geographical coverage of banks, with a more than seven-fold increase in the number of bank branches. Most of the new branches were opened in rural areas. This has led to a sharp decline in the population per bank branch, from 65 000 in 1969 to 14 000 in 1993. As a result, the rural population increased its share in total deposits from 7.2 per cent in 1973 to 14.6 per cent in 1993. Second, there was a positive real rate of return on bank term deposits (barring the years of oil price shocks of 1973/74 and 1979/80 and the high-inflation period of 1989/90 to 1991/92). McKinnon (1973) has argued that a deposit rate that is positive in real terms is an essential prerequisite for financial deepening. In the Indian context, there are few studies that have investigated the relationship between the bank deposit rate and financial deepening. A recent study with Indian data that uses a modern time series perspective to examine this relationship finds an unequivocal positive relationship between the real deposit rate and financial saving (Athukorala 1995).

The rationale behind the current financial sector reforms was the fact that two decades of social control of banks had led to a 'decline in the productivity and efficiency and erosion of the profitability of the banking sector' (Narasimham Committee, 1991: iii). The erosion of profitability of banks has emanated from factors operating on both the income side and the expenditure side of the banking industry. On the income side, banks have not been able to realize their potential income, owing to various restrictions on the use of funds. The most important of these have been the directed investment and credit programmes. Directed credit programmes have consisted of lending requirements to designated 'priority sectors' in the economy. One feature of these programmes has been that the rates of return available to banks on directed credits have been less than rates of return available on alternative uses of funds.

Since 1991, however, there has been a scaling down of the directed investment programmes, particularly with regard to the SLR. There has been a gradual reduction in the SLR since the onset of the reforms: in October 1994 it stood at 31.5 per cent, a level last observed in 1972. There has been less progress in reducing the CRR, owing mainly to an unstable macroeconomic environment.

An important change in the branch licensing policy since 1991 has been the freedom given to banks to convert non-viable rural branches to satellite offices on certain conditions. Banks are also allowed to close down loss-making branches, but only if the areas affected by the closure are being served by two other commercial banks (other than specialized banks for the rural sector, the 'regional rural banks'). Other changes in the policy include the freedom given to banks to open specialized branches per centre (in the categories of industrial finance, non-resident accounts and treasury management) without the prior approval of the RBI. These changes imply that while banks have been given considerable freedom in rationalizing the structure of their branches, the broad thrust of the pre-reform licensing policy in ensuring that the rural population have access to banking facilities has been maintained. Following the Narasimham Committee's recommendations, RBI announced in 1992/93 guidelines for the entry of new private sector banks. These guidelines attempted to ensure that new entrants were professionally managed, financially viable and will bring about technological upgrading of the banking sector.

Significant reforms in the banking sector have occurred with respect to regulations on the pricing of credit. There has been a gradual rationalization of bank lending rates, from 6 different rates prior to 1991 to 4 in 1991 to finally to 3 in 1993 (Table 3.7). In October 1994, the minimum lending

rate on bank advances over Rs 0.2 million was discontinued and banks were given total freedom to set their own lending rates.[7] The tendency in the credit market for commercial banks has been to use the advance rate of the State Bank of India (the dominant public sector bank in the country) as the prime lending rate. In Figure 3.1, we plot the real lending rate and the spread between the lending and deposit rates. Except for the oil price shocks, the real lending rate has remained positive at around 8 to 10 per cent. Both the extremely high level of the real interest rate and the spread between the lending and deposit rates can be seen as outcomes of the distortion in bank use of funds, with a significant proportion of the latter 'locked' into low-return priority sector loans and government securities and non-interest-bearing reserves.

In the Indian context, it is difficult to argue that the high real interest rate on loans to private corporate firms may have led to a more productive use of investible funds. Because bank loans are mostly used as working capital, a more plausible argument would be that private firms may have passed on the high interest costs they faced to their customers through higher prices (Taylor, 1983; van Wijnbergen, 1983; Sen and Vaidya, 1995).

The reforms in the financial sector have not so far encompassed a reduction in the priority sector lending requirements.[8] In part this is due to the fear of possible repercussions of such a move, particularly reactions of the well-organized and politically influential large and medium farmers. In part it could also be due to an awareness among policy-makers about the need to put in place an effective system for the financing of agriculture and small-scale industry before priority lending requirements are reduced. As has been argued in Sen and Vaidya (1996), given that agriculture is particularly prone to market failures owing to problems of asymmetric information and contract enforcement, there is little reason to expect that banks will lend voluntarily to agriculturists once lending requirements are withdrawn.

Regulation of Commercial Banks

In a deregulated environment, prudential regulation of banks is obviously of added importance. Deposit insurance has historically been an important aspect of bank regulation in most countries, and in India is provided by the Deposit Insurance and Credit Guarantee Corporation (DICGC), which also provides guarantee cover to eligible financial institutions for their priority sector advances to small borrowers and small-scale industries. DICGC was established in 1961 and is a wholly owned subsidiary of the RBI, its

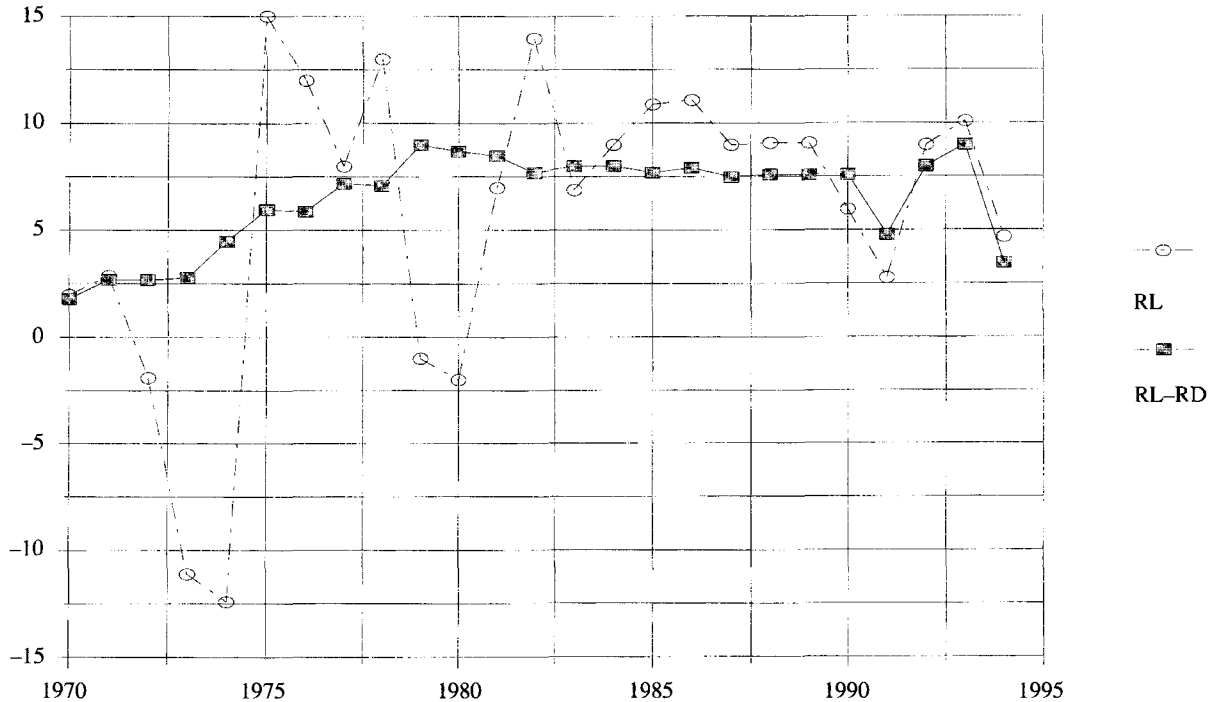

Figure 3.1 India: commercial bank real lending rate (RL = SBI advance rate) and spread between lending and deposit rates (RL-RD). Data refer to financial year.
Source: RBI, *Report on Currency and Finance*, various issues.

Table 3.7 India: structure of bank lending rates

Category of account	*October 1991*	*April 1992*	*April 1993*	*September 1993*	*October 1994*
Up to and inclusive of Rs 7500	11.5	11.5	12.0	12.0	12.0
Over Rs 7500 and up to Rs 15 000	13.0	3.5	n.a.	n.a.	n.a.
Over Rs 15 000 and up to Rs 25 000	13.5	n.a.	n.a.	n.a.	n.a.
Over Rs 25 000 and up to Rs 50 000	15.5	16.5	16.5	15.0	13.5
Over Rs 50 000 and up to Rs 0.2 million	16.5	n.a.	n.a.	n.a.	n.a.
Over Rs 0.2 million (minimum rate)	20.0	19.0	17.0	15.0	Free

n.a. = not available.

Source: RBI, *Report on Trend and Progress in Banking*, various issues.

paid-up capital of Rs 150 million being contributed entirely by the central bank.

All commercial banks are registered as insured banks, affording a uniform protection to depositors. Every depositor of an insured bank that goes into liquidation is entitled to receive from DICGC, through the liquidator, repayment of his or her deposits in all branches of the bank, up to a maximum amount prescribed from time to time (RBI, 1983: 154). In May 1993 the limit of insurance cover was increased from Rs 50 000 to Rs 100 000 per depositor per bank. In July 1993 the insurance premium was increased from 4 paise to 5 paise per Rs 100 per annum (that is, from 0.04 to 0.05 per cent per annum). With the growth in the banking system in the 1970s and 1980s, there has been a large increase in the number of fully protected bank accounts, which at 360 million in 1993 comprised 99 per cent of total bank accounts.

RBI has also altered the supervision system relating to banks by establishing the Board for Financial Supervision (BFS) in November 1994. BFS has been authorized to exercise powers of supervision and inspection in relation to banks and non-banking financial institutions including the

term lending institutions. Another important aspect of regulation in the post-liberalization period has been stricter application of accountancy norms, especially in terms of definition of non-performing assets and provisioning norms. Moreover, all banks were required to meet the BIS capital adequacy norm of 8 per cent by March 1996. At the end of March 1996, out of the 27 public sector banks, 13 had attained a minimum capital to risk-weighted asset ratio of 8 per cent, 11 had reached 4 per cent and the remaining 3 less than 4 per cent. The move to minimum capital adequacy ratios has been greatly facilitated by infusion of fresh capital into several public sector banks by the government in its 1993/94 and 1994/95 budgets. The government kept aside Rs 57 000 million and Rs 56 000 million in its 1993/94 and 1994/95 budgets to recapitalize public sector banks.

Other Financial Institutions

We present in Table 3.8 the percentage distribution of financial assistance disbursed by all these institutions to the industrial sector. Some of the all-India development banks do not figure in the table, because their share is negligible. The table indicates that the all-India development banks have all along contributed over 60 per cent of financial assistance to the industrial sector. Another important feature is that the UTI has grown in importance over the years, whereas the importance of the state level institutions has been on the decline.

We now turn to analyse the working of three of the important all-India financial institutions – IDBI, ICICI and SIDBI.

The two important changes financial liberalization has brought about are:

(1) Interest rate deregulation.
(2) The contraction of subsidized and captive sources of funds.

The interest rates at which IDBI and other all-India development banks lent before 1990/91 either directly for project loans to firms or as refinance to other financial institutions, was fixed by the government. The basic lending rate for direct loans was fixed at 14 per cent. This rate had remained constant over a long period. Term loans were rationed among various firms/sectors depending on the priorities set out by the government of India and the inherent soundness of the projects. The all-India financial institutions lent funds on a consortium basis till 1991/92, when they moved to a system of syndicated loans.

Table 3.8 India: institution-wise details of financial assistance to the industrial sector[a]

Institution	*1980/81*	*1985/86*	*1989/90*	*1990/91*	*1991/92*	*1992/93*	*1993/94*	*1994/95*
IDBI	47.3	42.8	28.1	28.2	29.6	28.4	28.8	30.5
IFCI	6.8	8.2	11.2	12.7	9.9	8.1	8.1	8.5
ICICI	11.5	9.8	13.5	15.9	14.4	15.6	16.5	20.5
SIDBI			8.9	8.8	7.2	6.1	6.7	7.4
IRBI	1.1	1.4	1.4	1.2	neg.	neg.	neg.	neg.
Subtotal[b]	66.7	62.2	65.3	68.1	62.2	60.5	63.8	71.2
UTI	3.2	10.7	10.7	12.4	17.9	20.1	22.2	13.5
Insurance	6.8	7.5	6.2	4.6	7.8	6.5	4.0	4.5
SFIs	23.3	19.6	17.2	14.2	13.7	10.8	8.5	8.8
Total	16 039	49 337	100 339	123 691	162 293	213 049	265 993	335 603

neg. = negligible.

[a] All the figures in the above are in percentages except the figures in the last row which are in Rs million.

[b] The sum of the shares of all India development banks does not add up to the sub-total because a few small development banks have not been included.

Source: RBI, *Report on Currency and Finance*, various volumes.

In August 1990, as part of the liberalization programme, the IDBI and other development banks (except SIDBI) introduced a two-tier interest rate structure. The first tier referred to the initial two years of the loan period or the implementation period (whichever was the shorter) of the project over which the interest rate was retained at 14 per cent. The second tier referred to the remaining period of the loan, over which the interest rate was raised to 15 per cent. In August 1991 the government permitted all term-lending institutions to charge interest rates in accordance with the perceived risks inherent in the projects, subject to a minimum lending rate of 15 per cent. This was an extremely significant policy initiative, which basically freed the interest rate on term loans. During 1991/92 the interest rates charged by IDBI ranged between 18 per cent and 20 per cent. The freeing of interest rates was followed by a significant rise in interest rates. During 1992/93 the IDBI reduced interest rates on term loans to a range of between 17 per cent and 19 per cent. The year 1993/94 saw a further decline in the interest rate, and the interest rate charged ranged between 14.5 and 17.5 per cent. In 1994/95, however, the interest rate charged was between 14.5 per cent and 18.5 per cent.

In the process of financial liberalization, the rates of interest SIDBI could charge to its direct borrowers has changed substantially. Nevertheless, the interest rates it charged are lower compared with those charged by IDBI and ICICI. In 1990/91 the interest rate SIDBI charged ranged between 6.5 per cent and 11.5 per cent, which rose to between 7 per cent and 15.5 per cent in 1991/92. This was a sharp increase, but was not comparable to the increase in interest rates of IDBI and ICICI. The rates SIDBI charged during 1992/93 and 1993/94 were between 8.5 and 17 per cent. During 1994/95, however, the interest rates charged ranged between 9 and 14.5 per cent.

The generally large range in the interest rates charged is due to the large number of financing schemes introduced by SIDBI each of which carries a different level of interest rate subsidy. The SIDBI has been lending to the small-scale sector at rates of interest much below the market rates. This is a conscious policy decision of the government, aimed at reducing the adverse impact that an extraordinarily sharp rise in interest rates would have on the small-scale sector.

Another significant change since 1990/91 has been the reduced dependence of IDBI and ICICI on the government of India and the RBI for funds. Moreover, with the reduction in the SLR for banks, an important captive source of funds for the IDBI, ICICI, IFCI, SIDBI, and SFIs has contracted. The bonds, shares and debentures issued by all of the above-mentioned organizations are eligible to be counted under the SLR. This implies that subsi-

dized and captive sources of funds have been reduced, and that the IDBI and ICICI have had to depend more on the market to raise resources. Nevertheless, the SLR requirements remain extremely important sources of funds. It should be noted that in recent years subsidy on this source of funds has been almost negligible, as all instruments held as part of the SLR carry a rate of interest close to the market rate. SIDBI nevertheless continued to receive a substantial amount of subsidized funds from the government and from the RBI. As regards lending operations, since 1990 the indirect loans made by both IDBI and SIDBI have declined dramatically. As in the case of banks, these institutions were also required to meet the BIS norms for capital adequacy by March 1996, which both IDBI and ICICI have achieved.

Regulation of Development Finance Institutions

In the process of financial liberalization, the environment facing the development banks has been substantially transformed. Regulations, in such an environment, are needed to keep watch on the asset quality of these institutions. Before the financial and real sector liberalization measures were introduced, the grant of an industrial licence to a firm was followed, almost automatically, by the sanction of assistance from the development banks. Thus, prior to the liberalization measures, these institutions used to follow rather liberal lending norms, with firms possessing a licence, particularly the high leverage allowed and preferred (debt equity ratios of 2:1 were the norm). The fact that the fiscal system favoured debt over equity led to weak financial structures of firms, which made them susceptible to sickness when faced with increased market uncertainties in the liberalized environment. For example, in September 1992, sick units in the private sector had outstanding bad and doubtful debts of Rs 125 860 million. Thus the quality of the development banks' portfolios prior to the reforms left a lot to be desired. We have also noted that over the past few years the two largest development banks (IDBI and ICICI) have to some extent been successful in improving the quality of their portfolios. With licensing requirements being dramatically reduced, those development banks with better abilities of techno-economic evaluation of projects will over the years improve their asset quality.

As the apex bank, the IDBI is the coordinating agency of the operations of all development banks; and the development banks, taken together, have been operating as a consortium. There were regular meetings of the institutional heads and, moreover, almost all development banks had representation on each other's boards of directors, which helped in coordinating the consortium agreements. With the areas of activities being neatly divided between banks, development banks and state level institutions, the

borrowers have little choice in selecting the institution to approach for loans. Though consortium lending had advantages (for example firms did not have to approach several institutions for funds), its greatest drawback was that if a particular loan application was rejected then the borrower had no other option to turn to. This created serious barriers to entry for firms. Moreover, this kind of coordinated lending did not pressurize each institution to independently scrutinize each project carefully.

Before the financial sector reforms were initiated, the consortium financing agreements included assistance to projects costing above Rs 100 million. Leasing finance, equipment finance and bills discounting were outside the consortium financing agreements. In 1990/91, the financial institutions were allowed to sanction assistance to projects costing Rs 200 million or less without reference to the inter-institutional fora. By 1991/92, the formalized system of consortium financing had given way to an informal system of loan syndication. There still exists nevertheless, some coordination between the various institutions, and they do not compete in the true sense of the term. Another impediment to promoting competition between institutions hitherto protected is that some institutions, such as SIDBI, still receive subsidized credit from either the RBI or the central government. For the subsidies to be passed on to the targeted sector, a clear restriction of areas of activities is inevitable. Though at a conceptual level increased competition between DFIs could lead to some improvement in resources allocation, the existing institutional structure precludes such a possibility.

Evolution of Financial Markets

The Stock Market

Compared with other developing countries, India has had fairly well-developed stock markets, whose role in the financial system has dramatically increased since the 1980s. In 1993 India ranked 22 in the world in terms of market capitalization, 24 in terms of value traded and 2 in terms of listed domestic securities. Currently there are 22 stock exchanges in the country, of which 20 are associated with particular cities. The largest stock exchange in the country is the Mumbai Stock Exchange (MSE), which accounts for more than 80 per cent of transactions. Recently two new exchanges were set up – the Over the Counter Exchange of India (OTCEI), which was established in August 1989 and became operational on 29 September 1992, and the National Stock Exchange of India, which was set up in November 1992 and started operations on 30 June 1994.

Market capitalization in the BSE at the end of March 1995 was Rs 4 688 370 million, compared with Rs 102 190 million in December 1984, market capitalization as a ratio of GDP rising from 4.7 per cent in March 1983 to 51.4 per cent in March 1995. Market capitalization as a ratio of GDP for all the stock exchanges put together rose from 7 per cent in March 1983 to 68.8 per cent in March 1994. This is a phenomenal increase by any standard.

In September 1992 the government of India allowed unrestricted entry in terms of volumes of investments both in primary and secondary markets to reputed FIIs such as pension funds, mutual funds, investment trusts and asset management companies. FIIs were required to obtain an initial registration with SEBI before making investments. They faced no lock-in period as regards disinvestment, no limit on total investment and a concessional tax rate of 10 per cent on long-term (more than one year) investment and 30 per cent on short-term capital gains.[9] As of October 1994, there were 234 FIIs registered with SEBI and as at end-September 1994 their cumulative net investments both in primary and secondary markets were estimated to be Rs 83.9 billion, or $2676.[1] million, of which $1665 million was invested in 1993/94 alone.

An important feature of stock-holding in India is that a large proportion of shares are owned by government-owned financial institutions. The thirty firms whose shares form the basis of the Mumbai stock exchange's index have a government-owned institutional share holding that ranges from 13 per cent to over 50 per cent. Therefore, the government can indirectly influence the market, and it has done so on some occasions by asking the financial institutions to prop up the market by increasing their buying activity when the market has shown signs of a major downswing.

The financial liberalization process has brought about fundamental changes in the operations of the stock markets in both the new issues market and the secondary market. Two of the most important among these measures have been the establishment in 1992 of the Securities and Exchange Board of India, which now works as the apex regulatory authority; and the freeing in 1992 of the pricing of new issues, which hitherto had been under strict government control. This measure explains the large increase in the role of shares as a source of funds for the private corporate sector.

Money and Government Securities Markets

Since 1991, with the initiation of the stabilization cum structural, adjustment programme, there has been an acceleration in the pace of change in the Indian money markets. This was a consequence of the

RBI's move toward the greater use of indirect tools for monetary policy, with the money market 'increasingly becoming the fulcrum for central bank intervention in the economy' (*EPW Money Market Review*, 15 October 1994: 2711). With the gradual phasing out of automatic monetization of the budget deficit, monetary policy has also become less subservient to fiscal policy, and has begun to take on an independent shape of its own.

In the treasury bill market, there was a phasing out of the 182 days treasury bill on 16 April 1992, with the introduction of the 364 days treasury bill on an auction basis on 28 April 1992. In January 1993, the government also introduced a scheme of auctions for 91 days treasury bills. There has been significant growth in the primary market for Treasury bills, with the total amount of outstanding auction-based 91 days treasury bills increasing from Rs 2500 million in January 1993 to Rs 34 500 million in mid-August 1994. The total amount of outstanding 364 days treasury bills increased from Rs 6660 million in April 1992 to Rs 71 600 million in mid-August 1994. An important reason for the growth in the primary market for treasury bills has been the use of open market operations by the RBI to absorb part of the excess liquidity in the banking system caused by the surge in foreign capital inflows. However, as with other segments of the money markets, secondary activity in treasury bills has not yet shown signs of picking up, with DFHI's annual turnover in the latter actually declining in the period between 1990/91 and 1994/95.

3.4 FINANCIAL LIBERALIZATION AND THE MACROECONOMIC ENVIRONMENT

In the summer of 1991, India was in the middle of a severe balance of payments crisis, with foreign exchange reserves that covered less than two weeks of imports. The immediate causes of the crisis were the increase in world oil prices and the drop in remittances of migrant workers in the Gulf following the annexation of Kuwait in September 1990. The foreign exchange crisis was exacerbated by the drying up of commercial loans and the outflow of foreign currency non-resident (FCNR) term deposits, because there was an expectation of default by the Indian government on its external commitments. FCNR deposits fell from $1536 million in 1990/91 to $290 million in 1991/92. However, the roots of the crisis were more long-term in nature and lay in the increasing deficits at all levels of government and in particular, in the central government's deficit.

The fiscal deficit to GDP ratio increased steadily over the 1980s, reaching a peak of 8.3 per cent in 1990/91. The fiscal imbalance spilled over to the external sector with the current account deficit to GDP ratio standing at 3.2 per cent in 1990/91. Also, with fiscal deficits being increasingly monetized, the inflation rate increased fairly steadily during this period to a high of about 14 per cent in 1991/92. At the same time, the 1980s were a period of strong growth for the Indian economy, with real GDP growth rates averaging over 5 per cent. This was mostly the result of a high rate of growth of manufacturing output. We provide a summary of the salient features of the macroeconomic environment in Table 3.1 (for details of the macroeconomic crisis and its aftermath, see Agrawal *et al.*, 1995).

The government that came to power in 1991 undertook a comprehensive stabilization programme in that year. This involved a drastic cut in the fiscal deficit, a devaluation of about 18 per cent in nominal terms, and removal of constraints on monetary growth. The measures seem to have had an almost immediate impact, with the inflation rate falling to around 10 per cent by the next fiscal year. Foreign exchange reserves increased from a low of $5479 million in 1990/91 to $9220 million in 1991/92. With the easing of restrictions on foreign portfolio investment, there was a large inflow of the same in 1993/94, leading to a further buildup of reserves to $19 254 million in the same year.

As expected, the austerity measures led to a slowdown in the growth rate of real output in the first year of the stabilization programme. By 1992/93, however, the GDP growth rate was showing signs of recovery, in most part owing to strong growth in agricultural output. The growth in output was maintained in 1993/94 and 1994/95, with the manufacturing sector now stepping up its rate of growth. However, there were indications of a return to macroeconomic instability by the end of the fiscal year 1993. This was evident by a resurgence in the inflation rate, which had once again crossed double digits by mid 1994. The return to macroeconomic instability may be attributed to a surge in private capital inflow, following the 1991/92 easing of restrictions on private capital inflow.

The initial surge in private capital inflow came in the form of portfolio investment, which increased from $92 million in 1992/93 to $3490 million in 1993/94, accounting for 85 per cent of total foreign investment inflow in that year (Table 3.9). Most of the increase in portfolio investment in 1993/94 came from an increase in foreign borrowings by domestic firms (in the form of GDRs) and FII investment in the Indian stock market. However, in 1994/95 the share of portfolio investment in total foreign

Table 3.9 India: foreign investment inflows, 1991/92–94/95 ($ millions)

Type of investment	*1991/92*	*1992/93*	*1993/94*	*1994/95*
Direct investment	150	341	620	1 314
Portfolio investment	8	92	3 490	3 581
GDRs	—	86	1 460	1 839
FIIs	—	1	1 665	1 503
NRIs	8	5	15	N/A
Offshore funds and others	—	—	350	239
Total	158	433	4 110	4 895

Source: RBI, *Report on Currency and Finance*, 1994/95.

investment inflows decreased to 73 per cent, because there was an increase in foreign direct investment from $620 million in 1993/94 to $1314 million in 1994/95. The surge in private capital inflows in 1993/94 led to a sharp increase in India's total capital inflows, from $2966 million (1.7 per cent of GDP) in 1992/93 to $8992 million (3.5 per cent of GDP) in 1993/94. Foreign investment, which comprised 20 per cent of total capital inflows in 1992/93, increased its share to 46 per cent in 1993/94.

The increase in total capital inflow in 1993/94 did not lead to any significant widening of the current account deficit in that year, which in

Table 3.10 India: balance of payments, 1990/91–94/95

Item	*1990/91*	*1991/92*	*1992/93*	*1993/94*	*1994/95*
Balance on current account					
$ million	–9 680	–1 178	–3 526	–315	–2 315
As percentage of GDP	–3.2	–0.4	–1.8	–0.1	–0.8
Balance on capital account					
$ million	7 188	3 968	2 966	8 992	8 218
As percentage of GDP	2.4	1.6	1.7	3.5	2.7
Overall balance					
$ million	–2 492	2 790	–560	8 677	5 903
As percentage of GDP	–0.8	1.2	0.1	3.4	1.9

Source: RBI, *Report on Currency and Finance*, 1994/95.

fact improved from –1.8 per cent of GDP in 1992/93 to –0.1 per cent of GDP in 1993/94 (Table 3.10). Instead, there was a sharp increase in official reserves, which went up from –$560 million (0.1 per cent of GDP) in 1992/93 to $8677 million (3.4 per cent of GDP) in 1993/94. This indicated that the capital inflow was met with a rather heavy degree of foreign exchange intervention by RBI as it attempted to limit the effect of the capital inflows on the exchange rate.

To sterilize the impact of the foreign capital inflow, the RBI undertook large-scale open market operations during this period that were equivalent to a 2.8 per cent increase in the cash reserve ratio. Also, after initially reducing the CRR from 15 per cent to 14 per cent between April and May 1993, the RBI raised it back in three phases from 14 per cent to 15 per cent between June and August 1994. While these steps may have mitigated the increase in money stock, clearly the thinness of the treasury bill market and the already high level of the CRR acted as constraints to any further sterilization of the capital inflow. Therefore, a large proportion of RBI intervention in the foreign exchange market during this period was in the form of purchasing foreign currency for domestic currency. Consequently, the growth rate of net foreign assets went up from 17.7 per cent in 1992/93 to 110.9 per cent in 1993/4. This led to a sharp increase in reserve money and M1 during this period.

The sharp increase in domestic liquidity in the latter half of the fiscal year 1993 had an immediate and perceptible effect on the domestic price level. The inflation rate had shown a steady decline since September 1991. However, this was reversed in mid-1993, and the rate of inflation climbed back to double digits by mid-1994. After that, the rate of inflation showed no discernible trend, hovering in the range between 8 per cent and 12 per cent. The high inflation rate in 1993/94 and 1994/95 was the major factor behind the sustained real appreciation of the rupee in this period, with RBI maintaining a more or less stable nominal exchange rate during this period (Figure 3.2).

In 1994/95, with private capital inflows still continuing unabated, there were indications of a lesser degree of intervention by the RBI in the foreign exchange market. Now, part of the capital inflow has been met by a higher current account deficit, as aggregate investment increased from 21.6 per cent of GDP in 1993/94 to 25.3 per cent of GDP in 1994/95, leading to an increase in the investment – savings gap by 0.7 per cent from 1993/94 to 1994/95. Reflecting the lower amount of RBI intervention in the foreign exchange market, the growth rate of net foreign assets declined to 44.3 per cent in 1994/95.

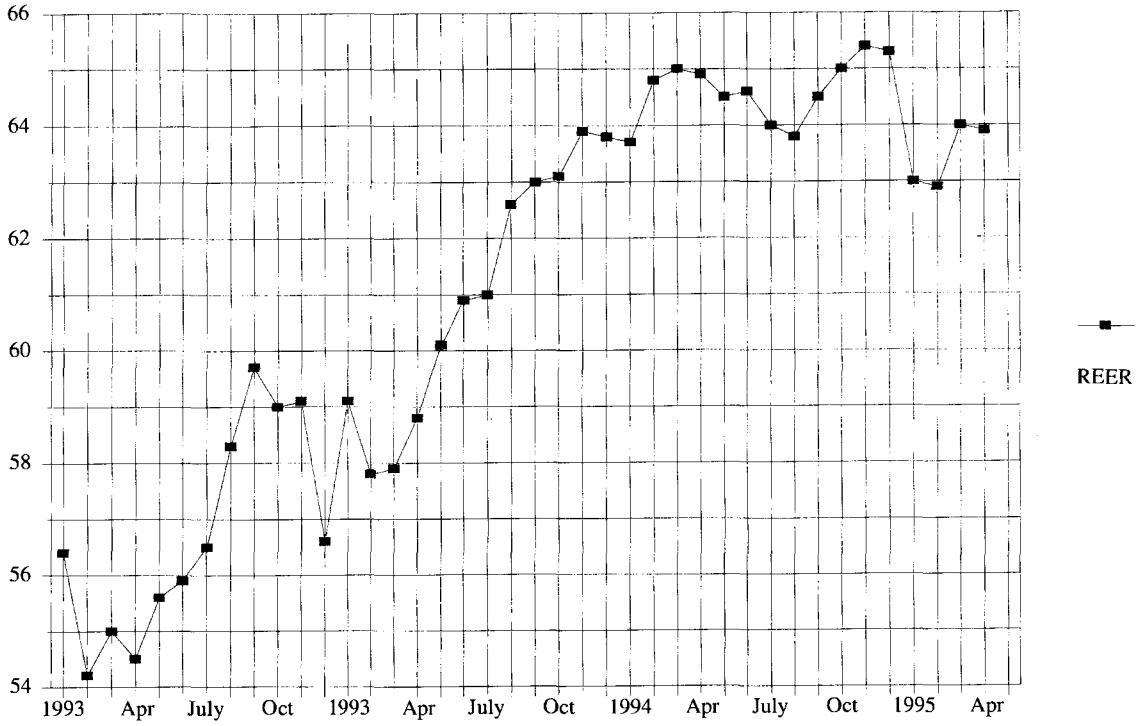

Figure 3.2 India: real effective exchange rate – trade-weighted (REER), March 1992 to June 1995.
Source: *RBI Bulletin*, various issues.

3.5 AN ASSESSMENT OF THE FINANCIAL SECTOR REFORMS IN INDIA

It is now over four years since the introduction of financial sector reforms in India. Though not enough time has elapsed to arrive at any firm conclusion about its success or failure, there are clear patterns emerging that indicate the possible course and likely implications of the reform process. It should be remembered that the reforms were undertaken at a time when the economy was in the midst of a severe macroeconomic crisis. That the reforms have not led to serious disruptions in economic activity can be attributed to both the initial conditions and the 'gradualist' approach followed.

Important among the initial conditions was the presence of a diversified financial sector with institutions that had a long history in the intermediation of funds. Three sets of institutions (in contrast to other liberalizing economies) of which special mention needs to be made are the commercial banks, which had already contributed significantly to the financial deepening in the economy, the development finance institution, which over a period of time had built strong links with the corporate sector, and the stock market, which, though underdeveloped in many respects, had a fairly important position in the mobilization of funds. Another favourable initial condition was that the reform process in the real sector had already begun well before the financial sector reforms. As a consequence, the market mechanism already had a significant role to play in the allocation of resources across various industries.

The gradualist approach followed involved the cushioning of certain sectors from the possible adverse consequences of deregulation. This is particularly evident in the case of commercial banks, whose mandatory lending requirements were kept intact to ensure the continuous flow of credit to the agricultural sector and the small-scale industries. Also, while the reform process has led to a decline in subsidized and captive sources of credit for development finance institutions in general, institutions specialized in the provision of long-term loans to the small-scale sector such as SIDBI continued to have access to them. Moreover, interest rates on both short-term and long-term credit have been deregulated in a phased manner.

The deregulation of financial markets has followed a sequence, with short-term markets such as the money and treasury bills markets being deregulated first. This was followed by the deregulation of credit markets (both short-term and long-term), the stock market (especially the primary issues market) and the market for dated securities. The timing of deregula-

tion of interest rates on long-term loans (which led to a immediate and significant rise in the interest rate) and the primary issue markets (which led to a substantial decrease in the cost of raising funds because of free pricing of new issues) enabled the corporate sector shift from the relatively costlier source to the cheaper source within a year. Though the investment climate was uncertain for about a year after deregulation of interest rates, within about two years the lost tempo was revived with the primary issues market playing a far larger role than ever before. An important characteristic of the way Indian firms (and firms in other developing countries) finance their operations is the importance of external sources of funds. This dependence on external sources has increased after the onset of reforms.

Perhaps the most complex issue in the process of financial liberalization is the sequencing of steps in the various markets and sectors. The experiences of other countries have shown that the appropriate ordering of the steps involved have often been the key determinant of the success of the reforms. Two aspects of the sequencing issue are of particular relevance for India. These are: (1) the sequencing of microeconomic and macroeconomic reforms and (2) the sequencing of real and financial sector reforms. With regard to the first, it can be argued that the ordering of the steps left a lot to be desired. In particular, the liberalization of controls on foreign portfolio investment without having adequately developed the treasury bills market led to problems of macroeconomic management two years into the reforms. Here, given that 'the need of the hour' in the wake of the 1991 crisis was macroeconomic stability, a more cautious opening up of the Indian capital market to foreign portfolio investment was called for, along with a greater use of quantitative controls on the inflow of short-term capital.[10] As Devlin *et al.* (1994: 41) have argued, 'the more pressing the need for management, and the more underdeveloped fiscal and monetary policy is, the more likely it is that the use of direct regulations on certain types of capital flow will be warranted, even if temporarily.' Therefore, while regulation of capital inflows can have possible microeconomic costs, it could be argued that, in the Indian context, the costs would perhaps have been offset by the benefits obtained from macroeconomic stability.

With regard to the pace of financial sector reforms in the future, two important constraints are likely to arise from the real sector. First, though a lot has been done to reduce legal barriers to entry, no real attempt has been made to streamline the operations of bankruptcy laws and exit procedures (see Sen and Vaidya 1996 for a more detailed discussion of these issues). Second, privatization of public sector enterprises (including those in the

financial sector), which is an important component of any comprehensive reform package, is not seen as a policy option in the near future (Vaidya 1994). It can be argued that for financial sector reforms to deliver the desired efficiency gains, reforms in the real sector, especially those relating to the exit and bankruptcy procedures, are vital.

Notes

1. This chapter was first presented as a paper in workshops at IGIDR, Mumbai and Bilkent University, Ankara, during February–March 1996 and June 1996 respectively. We gratefully acknowledge the comments of participants at these workshops, in particular, Dr Melvin Ayogu of the University of Jos, Dr Erol Cakmak of Bilkent University, Dr Jayati Sarkar of IGIDR and Dr Charles Soludo of the University of Nigeria. We would also like to thank Dr Jos!e Mar!ia Fanelli of CEDES, Dr. Rohinton Medhora of IDRC and Dr A. Vasudevan of the Reserve Bank of India, Mumbai, for incisive comments on an earlier draft.
2. Henceforth, we will use the following notation in this chapter: 1991/92 for the Indian fiscal year, 1 April 1971 to 31 March 1972, and 1991 for the calendar year.
3. Our analysis in this chapter is based on material drawn from the *Reports on Currency and Finance* (RCFs), the main publication of the Indian central bank. We are constrained to limit our coverage of the Indian financial sector reforms till mid-1995, because the most recent RCF available (the 1994/95 issue) does not go beyond mid-1995 for most financial and monetary data.
4. Preamble to the Banking Companies (Acquisition and Transfer of Undertakings) Act of August 1969.
5. IDBI was taken over by the government in 1975 and converted into a separate organization
6. Data on flow of funds after 1992/93 is not available.
7. However, lending rates on two slabs – advances under Rs 25 000 and between Rs 25 000 and Rs 0.2 million – continued to be administered.
8. Since October 1993, however, banks have been permitted some flexibility in their priority sector advances; small-scale industry being redefined to include units with investment in plant and machinery of up to Rs 6 million (previously it was Rs 3.5 million).
9. There was, however, a ceiling of 24 per cent of issued share capital on the total holdings of total FII investment and a ceiling of 5 per cent on a single FII investment in any one company.
10. The Latin American experience with foreign portfolio investment in the 1990s is particularly revealing. Chile employed a wide range of quantitative controls on short-term capital inflow and was able to manage capital flows fairly effectively till late 1995. Mexico, on the other hand, suffered a run on its international reserves in early 1995, owing to be confirmed in part to a more 'laissez-faire' attitude to short-term capital inflows (on this, see Devlin *et al.*, 1995).

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4 Nigeria

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4.1 INTRODUCTION: THE EXPERIENCE TO BE ANALYSED

We document Nigeria's experience with financial reforms during 1986 to 1993, with some continuing adjustments thereafter. On the basis of the standard performance indicators in the literature, we find no evidence that the reforms have either enhanced the financial system or facilitated macroeconomic stabilization. However, the perfidious execution of the programme suggests that the reformers have not kept faith with the reforms either. A clear lesson that seems to emerge is that institutions matter, so that capacity-building ought to be an integral part of any feasible reform programme. Achieving economic growth of the kind typically associated with financial reforms requires fiscal discipline and other enabling roles by the state because of coordination failure, and other imperfections inherent in financial markets.

A structural adjustment programme (SAP) may be defined as a policy package designed to induce sustained economic development in less developed countries. The package is a set of policy instruments that attempt to effect a transition from government-dominated, import-dependent economies to market-oriented, export-driven ones. Analysts (Summers and Pritchett, 1993, for example) generally agree that one of the most difficult reforms in a structural adjustment programme is microeconomic reform. Included in microeconomic reforms are divestiture of some public enterprises with commercialization of yet others; civil service reforms; and financial liberalization. Generally, institutional reforms are tough, because improvement requires 'good governance and considerable institutional capacity', both scarce resources. In fact, within the gamut of institutional reforms embodied in the microeconomic reform phase, financial liberalization is perhaps one of the most difficult. It is therefore unsurprising that much has been written (for instance, Dias-Alejandro, 1985, Gibson and Tsakalotos, 1994) based on the experiences (gains, pains and woes) of the various countries that have gone through the process. Lessons have been drawn, including in some instances a rethinking of the

optimal sequencing of the reforms, within the larger context of the structural adjustment programme. McMahon and Medhora (1994) note that even McKinnon, 'the most well-known proponent of financial liberalization, has somewhat reversed his position on the matter and sees it as one of the last steps in the sequence toward a market oriented economy'. The experience of Mexico with capital flight in early 1995 and its repercussions, including the subsequent debate on the manner in which the crisis was managed by the international financial community (particularly the response of the Bretton Woods institutions), portend that the liberalization issue is far from resolved.

This study contributes to that growing literature, by analysing Nigeria's experience with financial reforms. As the evidence will reveal, explaining the process of financial liberalization in Nigeria appears to echo Gibson and Tsakalotos (1994) that 'the typical programme of financial liberalization need not, and indeed should not be the only game in town ... and that a proper and successful programme of reform must distinguish between the different types of intervention.' Our premise is that institutions matter, and that some of the disappointments with outcomes of the Nigerian experiment may be rooted in the exclusive reliance on the guiding principle of the classical framework of McKinnon and Shaw (apparent from the programme content), and certainly in the perfidious execution of the programme. Too much reliance on the classical framework may have discouraged the giving of sufficient attention to the role of institutions during the (improvised) design of the reform, which nevertheless should have taken cognizance of Nigeria's peculiar political and social circumstances.

Although Nigeria's experience appears to have been characterized by what some observers call 'stop – go' policies, the neo-structuralist would argue that such an observed outcome is simply a predictable consequence of neglecting to integrate the design of institutional framework into the initial programming of the reforms. The observable implications, they note, are 'a series of cycles of first deregulation leading eventually to problems (financial crisis, structural economic weaknesses, and so on) then to reregulation as these problems become more acute, before a new move again materializes in favour of deregulation' (see Gibson and Tsakalotos, 1994). The rest of the chapter is organized as follows. Section 4.1 defines in terms of policy packages and results, 'financial liberalization the Nigerian way', and describes concisely the evolution of the economy within the period to be analysed. Section 4.2 analyses the impact of the reform on the structure, conduct and performance of the financial market (savings, service and intermediation), as well as its catalytic role on the regulatory framework. In Section 4.3, we examine the interaction of

stabilization policies and financial market reforms, examining specifically the effect of financial reforms on the conduct of monetary policy, investment and growth. Section 4.4 concludes by providing an overall assessment of the impact of liberalization on the financial system, and as well draws policy lessons and suggestions for further research. We deliberately shied away from any rigorous econometric analysis, because to attempt such with the degrees of freedom available (seven years of reform data) would be an oxymoron.

The Meaning of Financial Liberalization

In terms of the main measures adopted, financial liberalization in the Nigerian experience could be functionally defined to encompass elements of interest rate liberalization, reform of quantitative and sectoral allocation of credit, changes in operating procedure announced by the central bank, reform of capital controls, liberalization of entry into banking, and expansion in the number of permissible hybrid financial institutions and financial product lines.

For the Nigerian experience, a formal definition of financial liberalization in the overall context of the reform programme is difficult, because financial reform was not professedly an integral part of the structural adjustment programme. The general policy goals of SAP were to restructure consumption and production patterns, eliminate price distortions and to diversify and promote the export base of the economy. In particular, the aims were to:

> (1) restructure and diversify the productive base of the economy in order to reduce dependence on the oil sector and on imports, (2) achieve fiscal and balance of payments viability over the period, (3) lay the basis for a sustainable non-inflationary or minimum inflationary growth, and (4) lessen the dominance of unproductive investments in the public sector; improve the sector's efficiency and intensify the growth potential of the private sector. The policy strategies in terms of the main measures to be adopted were, (i) a realistic exchange rate policy coupled with the liberalization of the external trade and payments system, (ii) appropriate pricing policies in all sectors with greater reliance on market forces and reduction in complex administrative controls, and further rationalization and restructuring of public expenditure and custom tariffs.[2]

It was in August 1987 that the government took what was perhaps its first explicit policy step towards addressing the issue of liberalizing the

financial system. It began to incorporate specifically the phrase 'development of the financial system' into its policy initiatives.[3] Therefore, in terms of conception, the financial reform programme was an 'afterthought', and of necessity improvised.

Initial Condition and Evolution of the Economy

The structural adjustment programme began in July 1986 as a medium-term economic reform intended to end in June 1988. However, because of the government's commitment to continue pursuing the programme's objectives until they were fully achieved, the adjustment programme was effectively transformed into one of long-term reform, with an endogenous (and thus variable) endpoint.

Prior to the reforms that began in the 1980s, the financial sector was characterized by the following: an environment of passive competition; generally poor customer services; significant government equity presence in the banking industry; a scheme of sectoral credit allocation; limits on domestic credit expansion to the private sector; regulated interest rate regime; stringent entry conditions into the financial services industry (and banking in particular); capital controls including restrictions on foreign direct and portfolio investments; and a fiat monetary policy regime. In short, by what has become a classic definition (McKinnon, 1973, 1991b; Shaw, 1973), the financial sector was repressed. During the period 1986 to 1995, several financial reform measures were tried out, and several policy reversals occurred. These changes, which may be broadly categorized into exchange control and monetary control reforms, are summarized in Table 4.1, in chronological order under each category. The exposition that follows next is an overview of the macroeconomy within the period covered by our study.

The core of the economic reform was the move to a market-determined exchange rate system, which began with the introduction of the second-tier foreign exchange market in September 1986, and effectively devalued the naira instantly by 66 per cent. That, and the decontrol of interest rates in August 1987 were the main economic factors that, together with the political events that began to unfold four years later, set the course for the macroeconomy within the decade. Also implemented in 1986 were the elimination of the import licensing system and the abolition of commodity marketing boards. A noticeable impact of the 1986 reforms on the macroeconomy was the rapid growth in banking system credit, which exceeded the prescribed limit by a margin of 19 per cent. Most of the expansion occurred within the last two quarters of the year, both as a

response to the announcement effect of the devaluation, and as part of the impact. The announcement effect induced a rush to borrow to settle foreign-currency-denominated obligations before the devaluation. The effect of the impact was to induce borrowing activities on the part of those who could not conclude their transactions before the change, who had continuing obligations or who needed to fund the now higher working capital requirements.

The annual growth rate of inflation doubled from 5.4 per cent in 1986 to 10.2 per cent in 1987. The capital account weakened substantially, from a deficit of N845.8 million in 1986 to one of N6.15 billion in 1987, and direct investment declined by 40.7 per cent. The flow of investment spending was poor, particularly among the small and medium-scale enterprises considered to be the foundation for the new development and growth strategy for the country. Thus on 27 December 1987 the minimum rediscount rate was reduced in an attempt to initiate a downward trend in the interest rate profile; the initiative was predicated on high interest rates being a critical factor in low investment spending.

Progress with the reforms was jeopardized in 1988 in the face of opposition from labour and student unrest due to rising food prices, and also political backlash from losers under the reform programme. In May 1989, the country experienced serious riots against the Structural Adjustment Programme. The government's reaction to the increasingly restive mood of the citizens was to propose a reflationary package that embodied a heavy dose of government spending, raising the minimum wage, unfreezing wages in the civil service and removing the ban on civil service recruitment. Deficit financing of the expansionary government expenditure induced a rapid expansion in monetary aggregates, with domestic prices increasing by 38.3 per cent (10.2 per cent in 1987) and food prices rising by 52.2 per cent. Central bank lending to the government averaged N5.278 billion monthly (as compared with N1 billion for the entire 1987). Similarly, the balance of payments changed from a surplus of N159.2 million in 1987 to a deficit of approximately N2.3 billion, while the exchange value of the naira continued to depreciate.

Beginning in mid-1989, the government began to focus more on political changes than on economic reforms, and this bias continued until the financial reforms of 1995 (Table 4.1). Therefore, from 1989 onwards, consistent implementation of the Structural Adjustment Programme basically gave way to patchy reforms that were carried out whenever they were expedient. In the financial sector, attention was directed to regulatory enhancement and institution-building. Instances of patchy reforms were the launching of commercialization, and, where feasible, privatization of

public enterprises to achieve operational efficiency. The federal government also divested its holdings in banks in order to reduce political interference in commercial banking operations. To enable the process, banks were directed to grant credit facilities to Nigerians for the purchase of the shares. Furthermore, credit extended for this purpose was exempt from operative credit ceilings. Another instance of reforms was the policy change from direct to indirect monetary control with a transition programme that began in 1992 with the establishment of discount houses to deal in government securities.

The high rate of monetary expansion in 1988 provoked a higher inflation rate in 1989. Broad monetary aggregates in 1990 grew at 40 per cent, five times the rate of 1989. Continuing this trend in 1991, aggregate credit to the economy experienced its highest rate of expansion in more than a decade. The net claim on the government by the central bank increased by a whopping 134.6 per cent. In 1992 CBN battled, through direct monetary control measures such as the periodic issue of stabilization securities, to contain inflation and the impact of government's increasing extra-budgetary expenditure. The opposing forces of government spending and central bank's attempts to contain the adverse effect of the spending were inducing macroeconomic instability. Consequently, the financial market turned very volatile and loan quality at financial institutions deteriorated. Political uncertainty due to protracted strikes and civil unrest following derailment of the transition to civil rule contributed to the continuing macroeconomic instability.

The year 1994 was to be notable for its major policy reversals. Not only was the financial reform process halted, but some of the gains were reversed. The government pegged the exchange rate of the naira, reimposed exchange control regulations, which were previously softened to encourage foreign capital, regulated interest on foreign currency deposits, proscribed the parallel market for foreign currencies (actually it was now less tolerated), imposed control on bankers' tariff, reregulated deposit and lending rates, reintroduced aggregate domestic credit limit, applied selective credit expansion to banks, and imposed a period of moratorium on classified loans to certain group of borrowers. These policy reversals could be seen as a sign of panic by an incumbent government that had lost its courage. It is also easy to understand how the government at this point could have been overwhelmed by the very problems it partly created, but had mostly inherited. For instance, there were the continuing inflationary pressures, the persistent depreciation of the naira, the real shock from the removal of petroleum subsidy, the phenomenal rise in nominal interest rates (although real rates were still

negative), acrimonious labour relationships and an explosive political arena. All these would be more than enough to rattle even the most resolute of regimes.

The main macroeconomic policy thrust in 1994 was increased reliance on command instruments such as the fixing of interest rates, the centralization of foreign exchange receipts and the pegging of the official exchange rate. During the year, currency in circulation increased by 60.8 per cent, exceeding the deposit component of M1 (the sum of currency outside banks and checkable deposits) for the first time. The growth rate of aggregate financial savings dropped sharply to 20.3 per cent, down from the 63.4 per cent recorded in 1993. The policy reversals of 1994 continued to affect the economy adversely. However, lessons from experimenting with some of the policy changes may have induced subsequently some degree of positive adjustment in the direction of financial liberalization. Indeed, it could be argued that some of the more obvious negative consequences of the policy reversals may have partially jump-started the reform again. But most of the renewed progress, was in the area of regulatory rather than market reforms, although market reforms were hit the hardest in terms of policy reversals. Market reforms are notoriously difficult to keep on track, because they either generate appropriable rents or portend adverse redistributive effects to politically powerful groups, which thus make the reforms controversial and easily derailed.

On 16 January 1995 the Nigerian Investment Promotion Commission Decree of 1995 was enacted, permitting direct and portfolio investment in any business enterprise in Nigeria except for items on the 'negative list' as specified in the decree. The Decree and its complement, the Foreign Exchange Decree of 1995, together laid to rest the anachronistic Exchange Control Act of 1962, thus allowing for the beginning of a meaningful analysis of the implications of capital movements for macroeconomic stabilization. Fiscal policy was commendably restrictive in 1995. Monetary policy was also tight, with M1 growth at 8.1 per cent, mostly currency in circulation, and demand deposits actually fell. Responding to the tight monetary and fiscal policies, inflation fell during the year from 76.7 per cent in December 1994 (after peaking at 89.6 per cent in June 1995) to 51.6 per cent in December 1995.[4]

4.2 STRUCTURE AND EVOLUTION OF FINANCIAL MARKETS

This section analyses the impact of the reform on the structure, conduct and performance of the financial market, by examining the changes in the

Table 4.1 Nigeria: key reform measures and main outcomes 1986–95, (a) exchange rate and capital controls

Initial condition	*Policy package (measures adopted)*	*Results*
An exchange rate regime of (1) administratively-determined parity and (2) the allocation of foreign currencies by rationing. There were also controls on capital movements; including both direct and portfolio investments.	**1986** (September): A controlled floating rate mechanism linked to market forces was introduced – the second tier foreign exchange Market (SFEM). All non-government transactions were to be done through the SFEM. Foreign currency allocation was by predetermined quota, and bidding was subject to a cash-in-advance constraint. Subsequently a Dutch auction system of rationing was introduced in April 1987.	Exchange rate rationalization (a major devaluation). The naira depreciated by 66%, followed by an increase in the parallel market premium to 238%. The announcement (in July) of the government's intention to introduce SFEM increased the demand for loans for the immediate settlement of outstanding foreign obligations in order to avoid the effect of the anticipated depreciation of the naira. After depreciation, demand for bank credit continued in response to private sector need to satisfy devaluation-induced increase in working capital requirements. Overall, advances exceeded the prescribed credit limit by a margin of 19%, with most of the expansion occurring in the last two quarters of the year. To accommodate the increased demand for credit, banks had to liquidate a large proportion of their treasury securities.
	1987 (July): First and second tier markets merged into one foreign exchange market (FEM).	A unified exchange rate, although with parity set at below market clearing rate. Consequently, demand pressures continued to mount in the FEM, while the parallel market premium increased.
	1989 (August): *Bureau de change* established.	Formal recognition to small-scale dealers in foreign currencies, and *de facto* recognition to the parallel market (that is, parallel market activities became more tolerated, and hence overt).

Table 4.1 *(continued)*

Initial condition	*Policy package (measures adopted)*	*Results*
	1992 (March): Regime change from an administered parity to a managed float, which regime in December reverted to administered parity.	Exchange rate realignment (another major devaluation). Parallel market premium dropped from 79.2% to 7.5%. A transient convergence of the parallel and official rates was achieved.
	1993 (December): Suspension of trading in foreign currencies by the Central Bank ostensibly to halt the perceived destabilizing effect of the trading strategies of dealers in the official market.	Prior to the suspension, the interbank rate was at a record level; yet unbroken. The interbank rate crashed from 109.9% to 57.5% after the suspension, while the parallel rate dipped briefly and continued to depreciate.
	1994: Exchange rate pegged, and operations of *bureau de change* suspended.	The parallel market became less tolerated as the authorities publicly warned about the illegality of the market. Foreign currencies became more scarce, while parallel market premium continued to increase.
	1995 (January): Two landmark decrees, the Foreign Exchange (Monitoring and Miscellaneous Provisions) Decree of 1995, and the Nigerian Investment Promotion Commission Decree of 1995 were enacted. Cash-in-advance constraint requirement for foreign exchange demand removed.	Created an autonomous market where rates for all foreign currency transactions are market-determined. But *bona fide* government transactions are still at the 1994 fixed rate. The crazy bidding for foreign currencies have now stopped. The parallel rates appear to have stabilized, and no longer depreciating monotonically. No other macroeconomic effects of the transition to a market determined rate is yet evident; presumably due to the fact that most transactions in the private sector were already indexed to the parallel rate.

Table 4.1 Nigeria key reform measures and main outcomes 1986–95 (b) interest rate and monetary policy

Initial condition	*Policy package (measures adopted)*	*Results*
Control of nominal interest rates; credit ceilings on private sector lending; sectoral allocation of credit; liquidity ratios, cash reserve requirements, and special deposits.	**1987** (August): All controls on interest rates lifted, except (1) the minimum rediscount rate, and (2) yields on treasury securities. Number of priority credit sectors reduced from four to two.	A general rise in nominal interest rates, followed by a rise in the book value of outstanding loans, now subject to higher interest rate charges. An increase in the number of non-performing loans and doubtful advances in financial institutions. The Interest rate deregulation and the increased private sector demand for credit (due to currency devaluation) stimulated competition for bank deposits. Aggregate net domestic credit exceeded the policy target by 9.9% although sectoral allocations to preferred sectors were below specified targets. The parallel market premium dropped from 238% in 1986 to 11%. Annual rate of inflation doubled from 5.4% to 10.2%, while merchant banks restructured the maturity profile of their loans from medium- and long-term to short-term maturity of less than one year. Aggregate savings incresed by 33.7% (11.1% in 1986). Whilst banks were substantially divesting their holdings of short-term treasuries, private and public enterprises found these relatively attractive owing to improved yield following decontrol of interest rates and the concomitant upward adjustment in rates paid on government securities.

Table 4.1 *(continued)*

Initial condition	*Policy package (measures adopted)*	*Results*
	1991 (January): Interest controls reinstated by imposing a ceiling on lending rates (21%) and a minimum applicable deposit rate (13.5% on savings deposit). Banks were also directed to limit their gross margin (the difference between the average cost of funds plus administrative expenses and the maximum permissible lending rate) to 4%.	Before controls were reinstated, interest rates varied across institutions, with variation in return on savings up to 3%, prime rates between 3% and 6%, and returns on three-month deposits recording variations of up to 6%. Real returns on savings accounts and to lending were 10 and 20 percentage points, respectively. After controls were reimposed, average deposit rates dropped across all institutions. Similarly for prime rates and maximum lending rates. The spread between deposit rates and lending rates narrowed, but real rates remained positive during the year.
	1992: Ceiling on lending rates removed but banks to maintain a maximum spread of 5% between average cost of funds and top lending rate.	High levels of interest rates prevailed throughout the year, although real rates were negative, owing to the continuing high rate of inflation. Persistent volatility in the financial market helped sustain the strong preference for very short-term investments. Consequently yields on short-term securities exceeded that on long-term instruments ('the inverted yield curve'). Early victims of the inverted yield curve were unit trusts which found themselves with undersubscribed issues, from a high of 80% to a record low of 10.5% subscription rate. Time deposits recorded the highest relative gain in rates, and also the highest relative growth in deposits. The level of aggregate savings at the end of the year was approximately 16% of GDP.

Table 4.1 *(continued)*

Initial condition	*Policy package (measures adopted)*	*Results*
	1993 (June): Open market operations instituted.	Change to a regime of indirect monetary control. There were 21 weekly sessions of treasury bill sale during the rest of the year, of which only 2 were undersubscribed. The rest were either fully or oversubscribed. Although bids (on a discount basis) by dealers varied between 19.1% and 34%, the stop rates were between 23% and 27.8%. Operationally, it was a successful beginning, but money supply targeting proved abortive because of continued monetization of the government's huge deficit spending.
	1994: Interest rate controls reinstated.	Savings rate varied between 12% and 15%, while maximum lending rate at all financial institutions were capped at 21%. Currency in circulation increased by 60.8%, exceeding, for the first time, the deposit component of M1. The growth rate of aggregate financial savings dropped sharply to 20.3% (64.3% in 1993).

regulatory framework, the number and type distribution of firms in the industry and financial sector performance indices such as savings mobilization and intermediation (credit allocation). A diagram and description of the structure of the financial system within which these changes occurred is in Appendix 4.A. For a developing economy, the Nigerian financial system is relatively active, by having a wide range of securities, although trading in specific instruments is generally thin (except for active trading in the inter-bank market in the early 1990s to cover bidding for foreign currencies).

Impact Assessment

We now turn to the assessment of the impact of the reform on the structure, conduct and performance – savings mobilization, service quality and intermediation – of the financial services industry. Table 4.2 presents a profile of the industry from 1980 to 1995. The relaxation of entry restrictions into banking in 1987, combined with incentives for arbitrage opportunities inherent in the system of foreign exchange allocation, induced significant entry into the industry.[5] The number of commercial and merchant banks increased from 41 in 1986 to peak at 120 in 1993. But this statistic, relating, as it were, to banking alone, does not even begin to capture the full range of the vigorous entry activities that transpired within the financial services industry during the reform period. The number of brokerage houses increased from 23 to 140, the number of insurance companies from 88 to 107, new institutions came on line (three discount houses were 'shelf registered' and investment trusts were established), and 144 *bureaux de change* existed at the end of 1993. From a modest number in 1986, the industry has experienced a rapid growth that in 1995 featured six regional stock trading centres (from one floor in 1986); 116 banks with a network of 2394 branches nationwide, but mostly concentrated in urban centres (where service quality is surprisingly worse), 279 mortgage banks, 970 community banks, 275 people's banks and 292 licensed finance houses (618 are estimated to be in existence). It is, therefore, of concern that in 1995 service quality was still so poor that the authorities found it necessary to specify minimum requirements on quality. Legislating service quality, after almost a decade of reforms that distinctly produced an almost phenomenal increase in the industry configuration, presages structural flaws in the system (the significant increase in number has simply failed to deliver). An expectation of a well-functioning system is efficient intermediatory services. But because intermediational services could be priced both explicitly and implicitly, the existing array of explicit

price controls (in terms of regulated service charges and interest rate) may have forced substitutions at the margin that now manifest themselves through poor services.[6]

If the impact of structural changes is troubling, even more incredible tales await the reader regarding conduct and the systemic distress it engendered. The widespread distress in the industry is traceable to a combination of factors, the centre piece of which is an outright moral degeneracy (in the environment of the pervasive get-rich-quick mentality of the 1980s), which culminated in the passing of the Decree against fee fraud, popularly known as '419'.[7] First, there was the unbridled expansion in the number of institutions without a countervailing base of adequate regulatory capacity; hence an increased demand pressure on an already scarce managerial resource. Then followed the numerous shorter-than-arm's-length transactions in bank lending that flowed from a complex interpenetration of political, economic and financial powers. Many banks were either owned by a state government or the federal government, or were

Table 4.2 Nigeria: growth profile in the financial services industry, 1980–95

	Brokerage firms	*Commercial banks*	*Merchant bank*	*Insurance*
1980		20	6	70
1981		20	6	66
1982		22	8	79
1983		25	10	85
1984		27	11	88
1985	20	28	12	87
1986	23	29	12	88
1987	n.a.	34	16	91
1988	43	42	24	92
1989	61	47	34	98
1990	80	58	49	103
1991	110	65	54	107
1992	140	65	54	132
1993	140	66	53	132
1994	140	65	51	n.a.
1995	n.a.	65	51	n.a.

n.a. = not available.

Sources: Central Bank of Nigeria, *Annual Report and Statement of Accounts* (various issues), and the Nigerian Stock Exchange, *Annual Reports and Statement of Accounts*, 1988 and 1989.

subject to the controlling interest of governments – the results were corruption, insider dealing and imprudent lending.

If moral turpitude was the mastermind of the financial distress then government policies that generated appropriable rents (socially perverse incentives) were its willing assistants. The situation was compounded by lack of credible enforcement mechanisms, or at least so it appeared *ex ante*. *Ex post*, with the passing of the Failed Banks Decree 1994, 'everybody who is anybody' who owes money to distressed banks is being carted off to jail houses until they redeem their debts. This maverick method of enforcement contrasts with the Chilean case, in which, Diaz-Alejandro (1985), argued, 'When a crisis hits, agents will reason, bankruptcy courts will breakdown; when most everyone (who counts) is bankrupt, nobody is!'

Finance houses, community banks and mortgage banks have since joined the ranks of distressed institutions. Currently, 60 (commercial and merchant) banks are distressed; they account for over 50 per cent of the industry. These banks hold a total deposit liability of N92.523 billion (of which N52.613 is insured). Total banking system credit as at December 1995 was N121.809 billion, of which N56.978 billion is from the distressed banks and N19.083 billion is to insiders in general (N16.517 billion to insiders of distressed banks), mostly directors. Approximately N57.872 billion, or 48 per cent of the system credit, consists of non-performing loans, of which N35.884 billion was granted by distressed banks. At the end of 1993, a total of 32 community banks and 31 finance houses were in distress, while 118 finance houses were in default of matured obligations. But in 1994, a total of four banks and 20 finance houses were shut down, a record number since Nigeria has been a sovereign nation.[8]

The Regulatory Framework

Examining the character of the regulatory framework within which these events transpired reveals that prior to financial reforms, the regulatory arena was as passive as the industry it superintended. But once began, progress in regulatory enhancement was sustained. Nevertheless, it was not until three years after the inception of the reforms that deposit insurance was introduced. The Nigerian Deposit Insurance Corporation was established in 1988, but commenced operations in 1989. We do not mean to imply that an earlier introduction of deposit insurance would have averted the current crisis – rather, we believe that the establishment of a deposit insurance scheme signified the government's ostensibly growing concern about the soundness of its regulatory domain and its ability to

police its explosive expansion. The NDIC augments the central bank's supervisory capacity by increasing, at least in absolute terms, the numercal strength of supervisory personnel already under pressure. Furthermore, unlike the CBN, which has multiple responsibilities, the NDIC's preoccupation is the policing of insured banks. Obviously the shared supervisory responsibility offers some relief to CBN.

Nevertheless, it was not until five years into the programme that major banking reforms came (with the promulgation of Decrees nos. 24 and 25 in 1991), although, as part of the evolutionary process, changes in accounting standards and capital gearing – including the adoption of Basle concordant – had preceded these banking decrees a year earlier. Because our thesis is that requisite institutional capacity was lacking, we dwell on the description of the regulatory changes, for the reason that the government's efforts to install these institutions in midstream indicates its cognizance of the said deficiency. There is little to discuss by way of assessing the impact of enforcing the regulations because the regulations came too late to avert the disaster. However, diligent enforcement of accounting standards relating to classification and provisioning for doubtful accounts may have helped in ferreting out distressed institutions. Furthermore, it does not appear that deposit insurance coverage induced any distinct change in the behaviour pattern of insured banks. In any case, many depositors are *de facto* uninsured, because limit of coverage is rather low, at approximately $600 per depositor (at the current exchange rate).

Our discussion of the regulatory developments is anchored around the two 1991 landmark regulations, the Central Bank Decree of 1991 (no. 24), and the Banks and Other Financial Institutions Decree of 1991 (no. 25). These decrees were necessary to consolidate amendments over time to the banking laws, as well as specific policy decisions of the government usually aimed at making the banking system a more effective instrument of national development. Second, the new laws were a major component of the broader programme of financial sector reform directed at promoting competition and efficiency. Consequently, they enhance the central bank's control over monetary management, the supervision of banks and the enforcement of banking regulations.

The monetary control component of the regulation is Decree no. 24, designed to strengthen the Bank's ability to maintain monetary stability. It reduces substantially the size of advances the central bank may grant to the federal government in any year. Furthermore, the decree contains various provisions to facilitate the use of market-based instruments for monetary control, such as an extensive menu of public and private sector securities, as well as the power to purchase, sell, discount and rediscount

these securities. The power of the bank to request and obtain relevant information from economic agents and to issue specific directives are both strengthened and broadened to include all major classes of financial institutions in the economy.

Decree no. 25, the financial institutions component, governs the operations of banks and other financial institutions, and contains several provisions aimed at establishing a solid basis for financial sector development in a deregulated environment. (1) It consolidates in the central bank the functions of bank licensing, regulation and supervision, as well as creating both an off-site supervision division and an on-site banking one. (2) It strengthens significantly the regulatory powers of the bank with respect to such matters as the keeping of proper books of accounts by institutions, the control of distressed institutions and the insolvency resolution procedure for failed institutions, especially because national deposit insurance coverage is available only to commercial and merchant banks. (3) It enlarges the duties and responsibilities of directors as well as those of external examiners of banks, provides increased security for such external auditors, and also clarifies and reinforces the enforcement powers of the central bank regarding directives arising from routine examination of banks. (4) The conflict of interest provisions of the decree designed to deal with insider abuse of various kinds are approached comprehensively. (5) The decree confers on CBN the authority to grant licences for non-bank financial business (with the exception of insurance and stock brokerage) and prohibits the conduct of a wide range of non-bank financial business without a licence from the central bank. In this way, virtue of the decree, the central bank became in 1991 the omnibus regulator of financial intermediaries. 558 existing financial services firms applied for licences in that year alone.

These laws revamp the operating framework of the financial institutions' regulators, as well as enhance enforcement powers. Unfortunately, a sound law is no substitute for institutional capacity, which develops only over a course of time. Adding to this constraint was the expansion in the number of financial services firms that came under the supervisory domain of the central bank, particularly after the passing of the monetary control decree and the resulting annexation of finance houses. In retrospect, it seems that the financial morass in which the system is currently immersed could have been averted by a more restrained embrace of the *laissez-faire* dictum. Since 1991 there has been a virtual embargo on *de novo* entry of banks into the industry.

Subsequently, other laws evolved to complement the 1991 decrees. Specifically, in November 1994, the Failed Banks (Recovery of Debts)

and Financial Malpractices in Banks Decree was enacted. This law provides for the recovery of debts improperly granted directly and indirectly to directors and management staff of banks, and imprisonment for such and other malpractices, including those committed by bank employees. To ensure speedy trial of cases under the law and to enhance its deterrent effect, the law provides for the establishment of special courts or tribunals, each headed by a high court judge. Persons convicted under the decree could be sentenced to up to five years imprisonment without an option of fine. As part of the move to strengthen the overall regulatory framework, a committee to coordinate and harmonize the standards and supervisory efforts of the various regulatory institutions in the financial services industry was established. The committee – known as the Financial Services Regulation Coordinating Committee – is composed of representatives of the Central Bank of Nigeria, the Federal Ministry of Finance, the Securities and Exchange Commission, the Nigeria Deposit Insurance Corporation, the Nigerian Stock Exchange, the Federal Mortgage Bank of Nigeria, the National Insurance Supervisory Board, the National Board for Community Banks and the Corporate Affairs Commission (the last named being responsible for registering corporate bodies).

The current systemic distress ranks as one of the most serious contemporary economic issues confronting the country, next to the debt overhang (that is, the burden of internal and external debts that now accounts for over 65 per cent of all federal expenditure). Judging by the magnitude of the losses involved (which affect over 50 per cent of the industry, with approximately N92.5 billion of deposits out of which N52.613 billion was insured), the combined financial and human resources required to expeditiously resolve the insolvencies far outstrip the capacity of the nascent deposit insurance fund. Yet progress with insolvency resolution remains slow, encumbered both by political pressures to grant regulatory forbearance, and by the lack of explicit budget allocation to NDIC and CBN to deal with the distressed institutions. Presumably a tacit acknowledgment of this fact is in the maverick (extra-judiciary) approach to the recovery of the bad debts with which the insolvent institutions are saddled, particularly the recovery of insider loans.

Analysis of Industry Performance

Turning now to the performance of the industry, the evidence (Figure 4.1) suggests that there has been increased financial resource mobilization since the inception of the reforms, although the growth rates of both demand deposits and savings (passbook and time deposits) has varied,

sometimes dropping to figures below those obtaining before the reform. Analysis of sources and allocation of funds in Table 4.3 indicates that banks remained the chief mobilizers of domestic funds, and that deficit financing is the dominant application of funds. In 1993 the supply of funds to banks ballooned owing to the flight to quality from finance companies (recall that 31 finance companies were in distress, and 118 in default of matured obligations that year).

While there was little intermediation in mortgages, activities in the capital market were driven mainly by the privatization and commercialization – public enterprise reform – exercise. In comparison to the money market, very little funds were raised through equity issues; an outcome similar to a finding for OECD countries by Mayer (1989). Indeed, the gist of Table 4.3 is captured in Diaz-Alejandro (1985: 14):

> The freeing of interest rates and the relaxation of controls over financial intermediation will not necessarily encourage intermediation beyond short-term maturities. The flourishing of private financial intermediaries in the Southern Cone, even at the height of the boom, was limited to deposits and loans of less than six months' duration. Long-term intermediation via banks or bonds, not to mention via active stock markets, remained very weak ... Stock markets may witness short booms, but will mobilize very few funds; charges of manipulation ... lack of protection for minority stockholders, will reduce public interest ...

Very little has been discussed about capital market activities, because the core of the set of problems here lies in more fundamental issues such as credible and efficient enforcement of contracts, reliable communication facilities and the state of transaction technologies (infrastructure problems), rather than in financial repression *per se*. Although Table 4.4, based on a sample of 20 out of 100 listed firms on the exchange, shows the trend toward reduction in leveraging by corporations, we caution that the table is only illustrative, and any conclusions from it must be circumspect. Working capital requirements were being met mainly through short-term credits and retained earnings. The reduction could be partially a management strategy to reduce bankruptcy risk. Throughout the reform period, capacity utilization in the manufacturing sector averaged 40 per cent, and industrial relations were acrimonious, indicating a severe business environment. Overall financial resources have grown, despite the fact that the impact of the reforms on financial deepening has not been outstanding; for the trend since the reforms see Figure 4.1. Also, we should bear in mind that a major factor in the growth of the monetary

aggregates is the monetization of both the petrodollars and the government deficit, so that it is not clear whether or not the observed growth rates would have occurred anyway.

The McKinnon and Shaw hypothesis that an increase in real interest rates increases savings has spurred a body of empirical evidence that is yet inconclusive (Gibson and Tsakalotos, 1994, survey the evidence). Here, we contribute to that literature by reporting that the evidence from Nigeria appears not to support our prior expectations of the behaviour of the real interest rate and financial savings (Figure 4.2). Beckerman (1988) sheds some light on the observed accumulation of savings given negative real interest rates, by contending that

> individuals may still hold financial savings because of excess liquidity preference (resulting from uncertainty about the future) or because they lack access to credit and require to accumulate savings to make a large

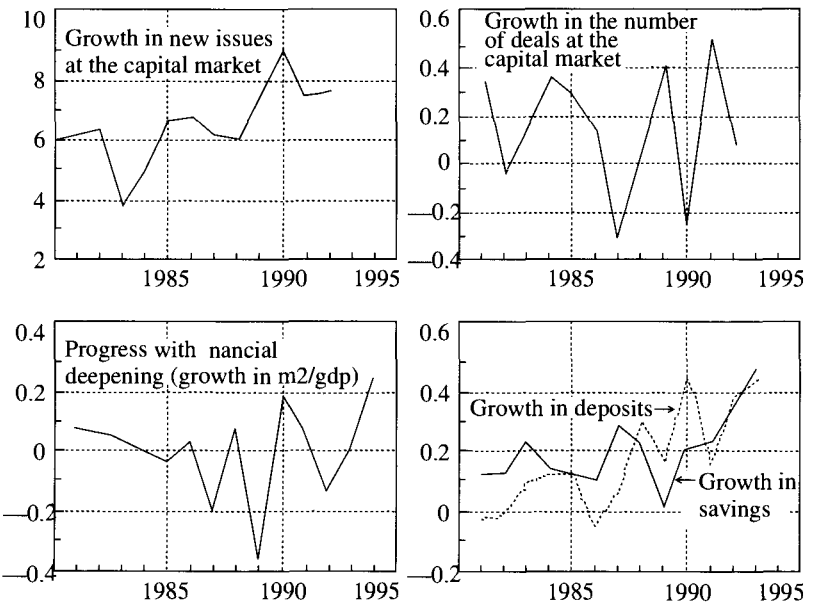

Figure 4.1 Nigeria: financial reforms key performance indicators, 1980–94. Deposits are checkable deposits. Savings are passbook and time deposits. M2 is the sum of currency outside banks, savings and deposits. Data of Central Bank of Nigeria, *Annual Reports and Statement of Accounts*, various issues and Central Bank of Nigeria (1994a).

purchase. The liquidity which financial assets offer may compensate them for the low if not negative real returns.

One final issue in our review of industry performance is the question of how, other than to insiders, was credit allocated in the economy? The evidence on that is clear – the government cornered all the money (Figure 4.3) – but not at the expense of crowding out private investment through the usual channels. Banks were awash with liquidity throughout the period analysed. In fact, a great deal of the preoccupation of CBN during the period was with containing excess liquidity in the system (Table 4.3). To the extent that crowding out occurred, it would be mainly due to the nature of monetary policy-making (described in the next section). It does seem from looking at Figure 4.3 that liberalizing interest rates has not led to a spectacular allocation of credit to the private sector. On the contrary, it appears that credit (particularly the private sector component) grew just as much, if not greater, during the pre-reform period. Allocative efficiency may have improved, though the current distress in the industry tends to belie this line of thought.

Next, we examine the macroeconomic effects of the reforms, with emphasis on stabilization policies and investment response.

4.3 FINANCIAL REFORMS AND STABILIZATION POLICIES

Savings Investment and Growth

A great deal is made in the liberalization literature of the connection between credit availability and investment and hence economic growth – the savings–investment spigot. In fact the second link in the McKinnon–Shaw hypothesis is that as more savings become available, so investment increases both in quantity and quality. The hypothesis is premised on the ability of the market to clear in the absence of external intervention. The hallmark of the Keynesian critique of this neo-classical view is that markets are not necessarily self-regulating. Savings and investment are not brought into equilibrium through the adjustment of interest rates, because investment and also savings depend on other factors besides interest rates. Tobin (1982) argues that financial and capital markets are at best highly imperfect coordinators of savings and investment. The evidence indicates that throughout the reform period, existing capacity remained largely underutilized, with capacity utilization in manufacturing industry averaging 40 per cent. Furthermore, it is believed that

Table 4.3 Nigeria: supply and allocation of credit (flow of loanable funds) in the formal sector (millions of naira)

Net demand	*1987*	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*
Private sector totals of which:	9 547.7	2 554.0	31 934.4	7 026.6	11 119.8	14 221.4	28 855.0	32 334.9
Loans & advances	9 528.3	2 375.0	1 541.4	5 862.78	10 095.8	12 560.6	25 994.8	29 978.2
Mortgages	17	19.6	24.4	34.3			125.8	193.1
Equities	2.4	159.4	1 627.6	1 129.5	1024	1 660.8	2 734.4	2 163.6
Public sector totals of which:	2 355.5	6 280.1	3 099.5	13 594.4	13 491.3	3 643.6	67 605.3	43 244.4
Federal	2 355.5	6 280.1	3 099.5	13 594.4	13 555.7	3 805.4	67 720.3	36 377.3
State					–64.4	–161.8	–115	6867.1
Total net demand	11 903.2	8 834.1	6 292.8	20 620.9	24 611.1	17 865.0	96 460.3	75 579.3
Net supply								
Banks	9 014.9	3 666.2	2 338.4	16 201.9	4 744.5	9 263.2	103 387.5	51 556.1
Mortgage institutions	21.5	34	38.3	91.4	129.1	295.7	90.1	313.6
Others	3 259.5	1 992.1	2 853.8	3 975.2	411.52	877.4	5 028.1	6 888.4
Contractual savings institutions	13.9	11.5	28.1	93.6	32.1	238.9	205.6	–186.2
Central bank	3 384.3	14 588.0	3 481.0	39 197.8	60 936.0	68 304.0	42 333.1	34 697.9
Total net supply	15 694.1	20 291.8	8 739.6	59 559.9	66 253.2	78 979.2	151 044.4	93 272.5
(Excess demand)/surplus	3 90.9	11 457.7	2 446.7	38 938.9	41 647.1	61 114.2	54 584.1	17 693.2

Loans, advances and mortgages are for both individuals and business. Banks are total of all deposits (time and demand), passbook savings, and securities (excluding certificates of deposit held by banks). 'Others' are securities, and time and savings deposits held at no bank financial intermediaries [see the structure of the financial system]. Excess demand if total net demand exceeds total net supply of credit, surplus (excess liquidity) otherwise.

Source: Computed from Central Bank of Nigeria, *Annual Reports and Statement of Accounts*, 1987–94, and Nigerian Stock Exchange, *Annual Report and Statement of Accounts*, 1988.

Table 4.4 Nigeria: dynamics of corporate financing profile

	Net current assets/equity	*Bank loans/total liabilities (short-term debts)*	*Bonds/total liabilities (long-term debts)*	*Debt/equity*
1986	21.8	3.8	17.1	20.9
1987	22.5	6.1	16.0	22.1
1988	23.5	7.5	13.8	21.3
1989	25.8	3.8	9.8	13.6
1990	28.8	4.5	8.4	12.9
1991	27.4	4.3	7.8	12.1
1992	36.0	3.2	6.1	9.3
1993	31.1	2.8	6.0	8.8

The figures were computed as averages of a random sample of 20 listed firms.

Source: *Nigerian Stock Exchange Fact Book*, issues 1992–94.

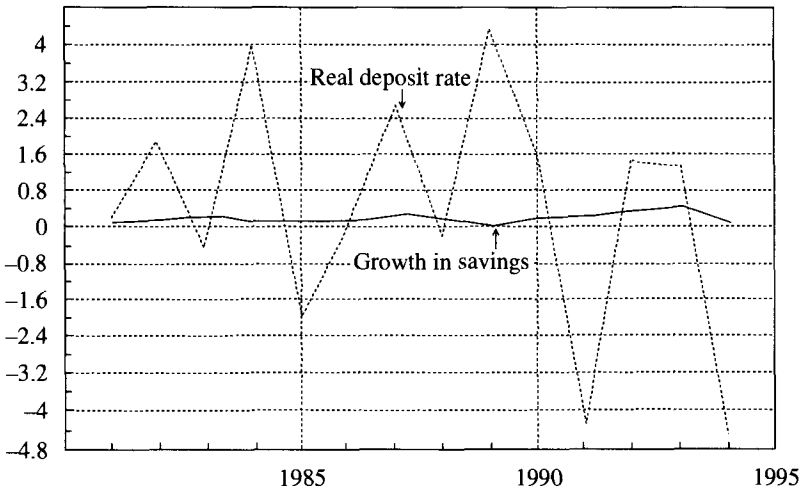

Figure 4.2 Nigeria: real interest rate and financial savings
Savings is the sum of time and passbook deposits.
Source: Central Bank of Nigeria (1994a).

upward adjustment in nominal interest rates and continued depreciation of the naira increased borrowing costs and product prices, which in turn reduced turnover and discouraged accumulation of inventory. Figure 4.4 plots the comovement (or lack thereof) among growth in financial savings,

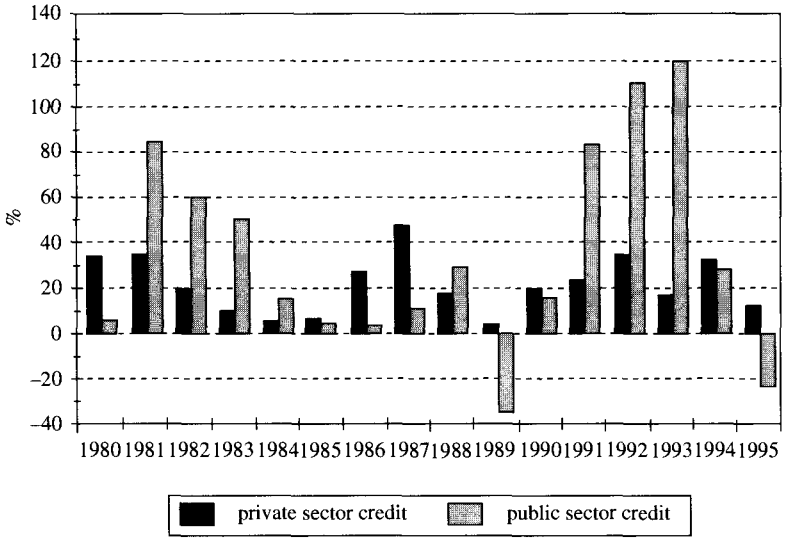

Figure 4.3 Nigeria: growth in public and private sector credit, 1980–95.
Source: Central Bank of Nigeria (1994a). Figures for 1995 are provisional from the World Bank Resident Mission in Nigeria.

in real investment and in non-oil real GDP. One does not need to look hard to discern the lack of a systematic relationship between the variables, although the apparent relationship between investment and GDP in 1989–91 would hardly impress even the most sanguine observer.

In 1991, when interest rate controls were reimposed, the official word was that the measure became necessary to reduce its adverse effect on investment. Figure 4.4 shows investment as declining in 1987, and again from 1990 to date, despite all the tinkering with interest rates. It is just as likely that the reduced flow of investment following the decontrol of interest rates in 1987 may equally have been due to increased uncertainty (financial market volatility, and political instability that was periodically eruptive). Dixit and Pindyck (1994) provide a new approach to the capital investment decisions of firms, stressing the irreversibility of most investment decisions, and the ongoing uncertainty of the economic environment in which these decisions are made. Using insights from the theory of options in financial markets, they point out that a firm with an opportunity to invest is holding an *option* that it loses when it makes an irreversible investment expenditure. This lost option value is an opportunity cost that must be included as part of the cost of the investment.

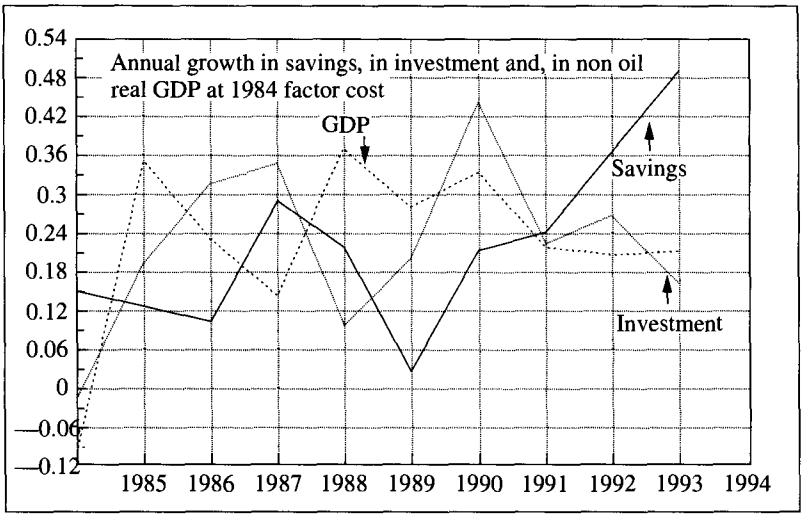

Figure 4.4 Nigeria: financial reforms and economic growth.
Source: Central Bank of Nigeria (1994a) and World Bank (1996).

According to them, recent studies have shown that this opportunity cost of investing can be large, and that investment rules that ignore it can be grossly in error. More importantly, this opportunity cost is highly sensitive to uncertainty over the future value of the project, *so that changing economic conditions that affect the perceived riskiness of future cash flows can have a large impact on investment spending, greater than, say, a change in interest rates*. This may help explain why neo-classical investment theory has so far failed to provide good empirical models of investment behaviour, and has led to overoptimistic forecasts of the effectiveness of interest rate and tax policies in stimulating investment.

Monetary Policy and Capital Movements

It is necessary to preface this section with the observation that discussions about the efficacy of monetary policy in Nigeria will remain largely inconsequential until fiscal policy is rationalized (that is, by means of transparency in public spending; reduction in recurrent budget deficits; and control, if not the elimination, of extra-budgetary expenditure). This is because the conduct of monetary policy is constrained by the requirements of financing government expenditure with high-powered central bank money.

Over time, the broad goals of monetary policy have been (1) domestic price stability, (2) reducing pressure on external reserves, (3) exchange rate stability, and (4) promoting employment and economic growth. Before the SAP, the main objectives were price stability, stimulating output and employment, and a healthy external balance. The same overriding objectives were still applicable during the reform period, with an additional goal of promoting the development of a market-oriented financial system (through ensuring a sound and stable financial market).

Recognizing the limited instruments available to it, and the difficulties of meeting all the policy objectives satisfactorily, the overriding concern of the central bank has been price stability, a 'conducive' level of interest rate and a strong currency. This focus is perhaps due to the perceived link between exchange rates and price level, and between interest rates, credit allocation and investment. Prior to June 1993 (the period of fiat monetary control), the policy instruments were credit ceilings on banks, administratively fixed interest rates, preferential sectoral credit allocation and the fixing of exchange rates. Cash reserve requirements and supplementary deposits were also used. With the switch to indirect control (in 1993), the chief instrument became open market operations. So far the operations have gone only one way: open market sale (to contain the persistent monetary expansion from deficit financing). The operating strategy could thus be described as reserve targeting, with monetary aggregates as the intermediate target. So far, its application has been fraught with problems, and the outcome disappointing.

This has been for several reasons. On the one hand, under the old fiat monetary control regime, banks found innovative ways of circumventing the restrictions, and at other times found the penalty for violating monetary policy guidelines acceptable. The central bank acknowledged that huge amounts of human and material resources were being wasted on the burdensome task of policing compliance with the guidelines. On the other hand, for the new regime of indirect monetary control seemingly proceeding in an environment of financial reforms, it is inappropriate to analyse how the results of the reforms helped or impeded the conduct of monetary policy. The reason is that the most important components of the reforms bearing on monetary policy were reversed shortly after the regime change. Specifically, in 1994, interest rate control was reintroduced, and the exchange rate fixed at a very low parity (400 per cent discount from the parallel market rate). Also, data capture is still very deficient, and the flow of critical information for policy evaluation and correction regrettably slow. Therefore, claims of financial reform contributions to the conduct of monetary policy is at the least suspect.

Another issue that merits discussion is the relationship between exchange rate management and monetary policy. First, we recall that setting of exchange rates was one of the direct instruments of monetary policy. The choice of exchange rate control as an instrument is predicated on the belief that in setting a low parity (fewer naira per unit of a currency), 'imported inflation' could be mitigated. But the setting of low parity conflicts with the goal of conserving external reserves. Attempts to resolve this conflict have been mainly through the rationing of the quantity of foreign exchange generated. Unfortunately, the scheme for allocating foreign exchange induced destabilizing behaviour on the part of market participants. Banks inflated their applications at the auctions in the knowledge that they would get only a fraction of the quantity bid – a strategic behaviour that is individually rational but has a high social cost. Because bidding was subject to a cash-in-advance constraint, banks borrowed at outlandish inter-bank rates, discounted their portfolio of securities, and held off on lending – just to participate. Inflated bids meant even higher levels of borrowing to back up such bids. The bottom line was that banks moved away from traditional lending and into the foreign exchange business. Traditional lending was out, foreign exchange business was in!

The excess demand in the currency market fuelled a growing parallel market premium, with the resulting arbitrage opportunity engendering speculative bidding, and rent-seeking. Moreover, with the reform of trade policy, the extra budgetary expenditure, and the persistent monetization of domestic debt, a great deal of purchasing power was let loose in a nation with a fondness for foreign goods, irresistibly priming excess pressure of demand on the foreign exchange. But there was yet another source of pressure: the servicing of the external debt, which was absorbing a high proportion (currently over 60 per cent) of federal government revenue (Table 4.5). The debt overhang implies an even higher fiscal deficit, more monetization and a continued increase in the level of excess demand for foreign exchange, unless a combination of measures is adopted – measures such as a reduction in fiscal spending – a recession, a severe import compression, and/or debt absolution. The appropriation of a large proportion of foreign exchange revenue to debt servicing thus has the dual effect of reducing the supply of foreign currency to the domestic economy, even as it stimulates the demand for it. Clearly, the structural imbalances, especially the rationalization of fiscal policy and the total elimination of fixed parity, must be addressed before monetary policy can be effective.

The central bank administers capital controls in conjunction with exchange control regulations. Together, these controls have involved restrictions on movements of currencies in and out of the country, as well

Table 4.5 Nigeria: dynamics of domestic national debt financing and external debt burden, 1988–94

	1988	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*
Debt	10 240.5	10 020.0	30 537.4	32 107.1	45 700.0	99 193.4	80 720.1
CBN	8 485.5	10 708.6	18 172.8	32 848.5	32 615.7	67 745.1	61 778.7
Commercial banks	–395.4	–4 043.4	5 246.7	–2 070.3	–965.8	23 465.6	9 837.4
Merchant banks	–109.0	–83.3	257.6	323.6	347.6	8 424.1	–806.3
Non-bank public	2 259.4	3 438.6	3 364.9	1 005.3	13 702.5	–441.4	99 103.3
External debt/GDP (%)	93.9	107.9	114.3	101.2	98.9	79.0	72.3
Total debt/GDP (%)	n.a.	n.a.	146.4	137.1	130.4	110.9	110.4

n.a. = not available.
All figures are in millions of naira. Amounts shown are annual changes (additions or reductions). Total debt is the sum of domestic and external debt. Some of the changes do not add up because of adjustments for amounts on lent to state governments and public agencies.

Sources: *CBN, Annual Reports and Statements of Accounts*, 1992; 1993; 1994; *CBN Statistical Bulletin* 3(1), 1992.

as the level of equity participation by foreigners in ventures within Nigeria. Since 1992 there has been some relaxation of controls in respect of direct investment. However, it was not until January 1995 that substantive reforms occurred in respect of capital controls. Two major decrees abolishing capital controls and partially liberalizing exchange rates were enacted: the Foreign Exchange (Monitoring and Miscellaneous Provisions) Decree of 1995 and the Nigerian Investment Promotion Decree of 1995. These decrees abolished almost all capital controls on both foreign direct and portfolio investments, and created a dual foreign exchange regime (there are still some ventures off limits). In the one segment (the autonomous market) the value of the naira is determined by market forces, with central bank intervening occasionally, while in the other it is at a fixed parity. The fixed parity is used for government transactions.

The dismantling of capital controls is the latest event in the reform programme. Consequently, data on the impact of the decontrol are yet to be available, but little is expected to change. The reason little will change is that prior to decontrol, capital flight continued to occur through a vibrant parallel market. As indicated in Figure 4.5, net capital flow has been persistently negative, presumably owing to intolerably high country risk. With interest rate controls still in place, there is little opportunity for destabilizing international capital flows. The prognosis on the investment climate does not, on a risk-adjusted basis, look attractive. In any case, where would the (clean) 'hot money' go?[9] To the private sector, or to finance deficit spending?

In the private sector, the fundamentals do not look promising. The Federal Office of Statistics reports GDP growth in 1995 at 2.2 per cent, with the industrial sector at 2.1 per cent and services at 2 per cent. The perception in most parts of the Lagos business community is that 1995 was much worse than 1994, with a fall of 5.1 per cent in the index of manufacturing activity.[10] In the public sector, CBN reports that appropriations in 1994 for debt servicing exceeded 60 per cent of the current revenue, and this does not even take into account the fact that most domestic debts are rolled over at maturity. Therefore, although treasury securities may proxy for risk-free investments to internal investors, it is doubtful whether externally it will be priced as such. Moreover, such pricing remains hypothetical as long as interest rates are controlled.

4.4 CONCLUSION

Overall, financial reform increased the scope, but not the depth of the financial system. It failed to improve the quality of financial services, but

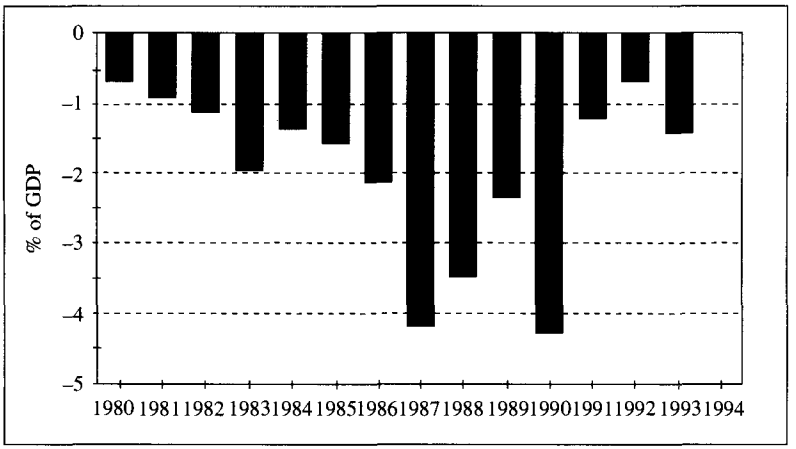

Figure 4.5 Nigeria: (public and private) capital flow through formal channels, 1980–84.
Source: Central Bank of Nigeria (1994b).

induced systemic fragility. Moreover, it does not seem to have enhanced the process of credit allocation in the economy, judging by the prevalent distress and the conduct of firms in the industry (of which the primary mortgage institutions are a classic case; see Table 4.3). Why has competition failed to deliver?

First we note that results from this study agree with Caprio and Summers (1993) that, 'the assumption that perfect competition will solve all problems in finance – especially banking – can be dangerous'. Thus we are back to the same theme that has been stressed by many authors – the role of the state in economic development, particularly the need to distinguish between the different types of intervention, rather than excising the state (Datta-Chaudhuri, 1990; Krueger 1990; Gibson and Tsakalotos, 1994; Stiglitz 1994 (to name a few)). Second, it is even more difficult to assess the negative contribution of the reforms, because of the contemporaneous political instability. Therefore, without controlling for other major events, we cannot fairly judge the outcome of a reform that was occurring contemporaneously with other changes (government was pursuing reforms on several fronts), the least of which are political reforms in the nature of the recalcitrant transition to civil rule. At certain periods, it seemed that the government had resolutely pursued political goals without regard to the economic consequences. It is also obvious that the reformers have not kept faith with the reforms, vacillating as it were between interest rate control and decontrol, as well as between liberal and repressed exchange rate regimes.

From the incidence of macroeconomic instability, the lack-lustre performance of investment during the reform period (which, we have suggested, may be due to uncertainties) and, especially, the failure of the financial services industry to deliver, one inescapable empirical question that must linger is the extent to which lack of a programmed financial liberalization exercise affected the outcome of the reform. As so often in other cases, the question was also raised here of how much of the failure was due to ill design, or how much to faulty implementation. We stated at the outset that the programme's design was improvised, and although the scope of this study has not permitted us to delve into the casual factors and hence to specify which of the elements of the undesirable outcome were due to that improvisation, such a line of inquiry suggests itself naturally for further studies.

Nevertheless, we would like to end on two key points in this regard. First, as Datta-Chaudhuri (1990, p. 23) notes:

> one often hears people talking about 'a good plan implemented badly.' This dichotomy between the formulation and the implementation of a plan is usually false. If a plan is supposed to be a feasible action program, then it must have been designed on the basis of realistic assumptions regarding the expected behavior of economic agents. Difficulties regarding implementation should arise only from unanticipated exogenous shocks.'

Second, Krueger (1990) warns that 'decisions regarding economic policy are not made by economists/technocrats, except in rare instances; hence political pressures often shaped economic reform programs in ways that were not consistent with the ideal resource allocation goals initially envisaged.' The point that seems to emerge is that institutions matter and perhaps should constitute those critical components of the 'realistic assumptions regarding the expected behavior of economic and political agents'.

APPENDIX 4. A STRUCTURE OF THE NIGERIAN FINANCIAL SYSTEM

Financial Intermediaries

These consist of four categories of depository institutions, two types of contractual savings institutions and five classes of investment intermediaries (often called other non-bank financial intermediaries).

Depository Institutions

1. *Commercial banks* dominate the Nigerian banking industry. As at 1994, there were 65 commercial banks with a network of 2259 branches.
2. *Merchant banks* – transact wholesale banking business. They are expected to focus on medium and long-term lending, thereby filling the niche created by the concentration of commercial banks on short-term credits.
3. *Specialized banks* – are established to target socially desirable projects for financing.
   (a) *People's Bank of Nigeria* – opened for business in October 1989 to provide credit facilities at grassroots level and thereby promote self-reliance. Loans have an upper limit of N10 000 and a minimum of N50, with credit requirements lower than conventional criteria at commercial banks.
   (b) *Community banks* – are designed to be financially viable banks owned and managed by a community or group of communities. Their popularity is evidenced by the growth from a single bank in December 1990 to 970 at the end of 1994.
4. *Development banks* – are established to provide medium and long-term finance to targeted sectors of the economy. They are, beginning with the newest addition, the Urban Development Bank, the Nigerian Industrial Development Bank, the Nigerian Bank for Commerce and Industry, the Nigerian Agricultural Development Bank, the Nigerian Export–Import Bank and the mortgage institutions.
   (a) *Urban Development Bank* – commenced operation in 1992; is designed to provide financing for the development of infrastructure facilities in urban centres.
   (b) *Nigerian Industrial Development Bank* – provides credit to the industrial sector on favourable terms. The CBN and the government own major interests. The bank is authorized to borrow locally and internationally.
   (c) *Nigerian Bank for Commerce and Industries* – is designed to promote the growth of small and medium-scale enterprises by granting loans, underwriting securities and performing feasibility studies.
   (d) *Nigerian Agricultural and Cooperative Bank* – finances agricultural development projects as well as investments in allied industries. A total of 634 898 agricultural projects benefited from the bank, whose outstanding advances totalled N5.9 billion as at the end of 1994.

(e) *Nigerian Export Import Bank (NEXIM)* – was established in 1990 to manage several credit facilities aimed at improving the nation's non-oil exports. It provides rediscounting and refinancing facilities, trade finance and project finance, and underwrites export-trade risks.

(f) *Primary mortgage institutions* – are thrift institutions engaged principally in mortgage originations.

Contractual Savings Institutions

– are financial intermediaries that acquire funds at periodic intervals on a contractual basis. These are pension funds, life insurance companies, and fire and casualty insurance companies.

1. *Insurance companies* – consist of fire and casualty, life companies, and those that offer both types of coverage. The loan portfolio is concentrated on non-business consumer facilities and mortgage credits (mostly loans to employees in the industry and to policyholders). There is also a modest investment in private sector debt and equities. Investment in public debt is relatively small.
2. *National Provident Fund* – is a mandatory pension scheme for non-pensionable public servants and employees in the private sector. The NPF is required to invest a specified proportion of its funds in government securities. Its record of performance is considered relatively poor.

Investment Intermediaries

These are other non-bank financial intermediaries and hybrid institutions such as *bureaux de change* and discount houses.

1. The *National Economic and Reconstruction Fund* is designed to mobilize domestic and foreign funds to assist small and medium-scale enterprises.
2. *Finance houses* – are the latest incorporation into the formal sector from the informal financial sector following the Banks and Other Financial Institutions Decree (BOFID) no. 25, 1991 which authorized the central bank to license all finance houses operating in the country. Although not depository institutions, finance companies are allowed to borrow a minimum of N100 000 from any person or corporate organization subject to certain statutory limitation on total outstanding borrowing. Finance houses are authorized to transact a general class of lending and leasing business to consumers, industrial, commercial, and agricultural enterprises. They can also engage in export financing,

financial advisory services, business consulting, electronic funds transfer, and issuing of vouchers, credit cards and token stamps.

3. *Discount houses* – a discount house is any person in Nigeria whose business is trading in and holding of treasury bills, commercial bills and other securities, and whose operations in the opinion of the CBN are those of a discount house. Discount houses are designed to promote efficiency and the rapid growth of the money market, and to act as intermediaries between the central bank and other banks.
4. *Unit trusts* – established in 1990 as financial intermediaries that acquire funds from savers for portfolio investment.
5. *Bureaux de change* – were established in 1989 to accord legal recognition to small dealers in foreign exchange.

Financial Instruments

These consist of money market instruments (of maturity less than five years) and capital market instruments of long-term maturity (over five years). Commercial banks and merchant banks dominate the money market, while capital market activities centre on the Nigerian Stock Exchange, with five regional trading floors. Government debts, corporate debts and equities trade on the floors. There were 140 brokerage firms registered to trade in the market in 1994.

Money Market Instruments

1. *Call money* is generally unsecured interbank placements of maturity from overnight to 90 days.
2. *Treasury bills* (on the basis of volume outstanding) dominate the money market.
3. The *Nigerian Treasury Certificate* was introduced in 1968 as a medium-term instrument of one- to two-year maturity designed to bridge the gap between treasury bills and other medium term instruments.
4. *Certificates of deposit* are of maturity from 90 days to 3 years, and are traded among banks. Merchant banks are the main issuers, while commercial banks are the leading holders.
5. *Commercial papers* are the main supplement to bank loans for fulfilling seasonal credit requirements of the private sector. Commercial papers are popular with both commercial and merchant banks.

Capital Market Instruments

1. *Nigeria Government Development Stock* – are long-term debts of the federal government. Government stocks are unpopular and transactions have declined since 1987. Savings institutions are the dominant holders.
2. *Industrial loans* – are corporate bonds with fixed coupon rate.
3. *Preference stocks* – are shares in corporations that entitle holders to dividends before any other class of investors.
4. *Bonds* – refer to municipal bonds issued by state governments.
5. *Equities* – are ordinary shares in corporations.

Overview of Financial Markets Regulation

The principal regulatory agencies are the Central Bank of Nigeria, the Nigerian Deposit Insurance Corporation, the Securities and Exchange Commission, the Federal Mortgage Bank of Nigeria and the Federal Ministry of Finance.

- *Central Bank of Nigeria (CBN)* – regulates investment intermediaries, and all depository institutions except mortgage firms.
- *Nigerian Deposit Insurance Corporation (NDIC)* – provides limited insurance coverage on the deposit liabilities of all licensed banks to a maximum of N50,000 per depositor. NDIC also conducts periodic examination of the books of insured institutions.
- *Federal Mortgage Bank of Nigeria (FMBN)* – is the licensing and the principal regulatory agency for mortgage institutions.
- *Securities and Exchange Commission (SEC)* – regulates operations in the capital markets to ensure orderly trading and probity, licenses stockbrokers and issuing houses, investigates cases of abuse and 'insider trading.'
- *Federal Ministry of Finance* – licenses and regulates *bureaux de change* and insurance companies. The National Insurance Supervisory Board also has maintains oversight responsibilities on insurance companies.

Notes

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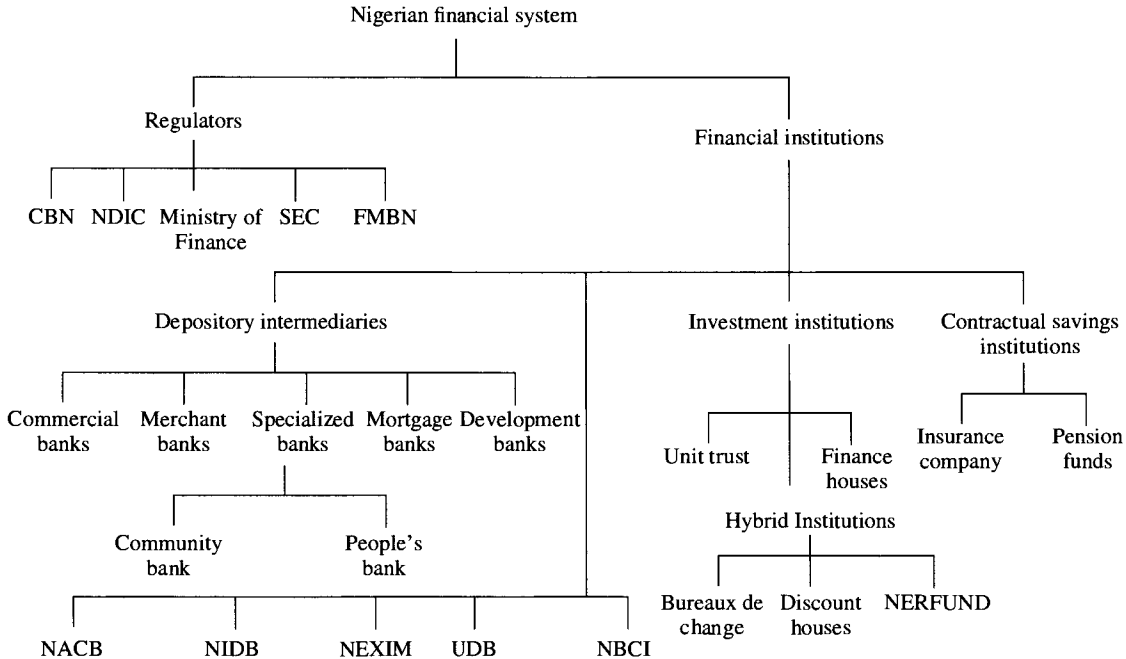

Figure 4.A1 Nigeria: structure of the financial system
Note that some development banks accept retail and/or wholesale deposits while some do not, hence the dual categorization.
Key: CBN = Central Bank of Nigeria; NDIC = Nigeria Deposit Insurance Corporation; SEC = Securities and Exchange Commission; FMBN = Federal Mortgage Bank of Nigeria; NIBD = Nigeria Industrial Development Bank; NEXIM = Nigeria Export-Import Bank; UDB = Urban Development Bank; NBCI = Nigeria Bank of Commerce and Industries

2. Source: Central Bank of Nigeria, *Annual Report and Statement of Accounts, 1986.*
3. Central Bank of Nigeria, 'Amendment to the Monetary Policy Circular No. 21 of January 1987', *Annual Report and Statement of Accounts, 1987*, p. 7.
4. Source: 1995 provisional data from World Bank (1996).
5. The official parity was determined administratively, and the supply of currencies to authorized dealers from the formal channel (CBN) was rationed. Consequently, banks who were the only authorized participants at the foreign currency bidding session made profitable business from arbitrating foreign currencies.
6. Another explanation could be due to switching costs in banking, which tend to confer local monopoly powers on banks even in the presence of multiple incumbents. In such a circumstance, a finite increase in the number of active firms may not necessarily engender competition (and improved services). Stiglitz (1994) makes the same point.
7. In terms of similarity, a reading Diaz-Alejandro's recount of Chile feels like a *déjà vu*.
8. Source for distribution of bank credit: Omachonu (1996).
9. Recently, with the decontrol of capital movements, the Nigerian capital market has been alerted by Interpol on the possibility of money laundering. See, for instance, Anaeto (1996).
10. Source: World Bank (1996).

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5 Turkey

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5.1 INTRODUCTION

Integration of the developing national economies into the evolving world financial system has been achieved by a series of policies aimed at liberalizing their financial sectors. The motive behind liberalization was to restore growth and stability by raising savings and improving economic efficiency. A major consequence, however, has been the exposure of these economies to short-term capital movements, which have increased financial instability and caused a series of financial crises in the developing countries.

Integration was further deepened by the dollarization of these economies when they became reliant on foreign capital for their privatization programmes. Such a reliance became inevitable when governments were unable to implement credible anti-inflationary policies while at the same time demanding access to foreign currency. In many cases, inflows of short-term capital were used not to create new productive investments that would generate growth, but instead simply created new dollar obligations for which there was no clear source of repayment. The existence of a currency board in Argentina, for example, provided short-term stability, but the fact remains that the current exchange rate of the Argentine peso against the dollar has been financed with offshore debt and privatizations. As such, this policy is unsustainable.

Financial liberalization, by way of reliance on short-term capital inflows, intensified the already existing problems such as budget deficits, monetary instability and market distortions. The problems were the consequence of the very nature of these flows, because they created instabilities in exchange rates, interest rates and financial asset prices. Because most developing country stock markets are in their infancy, they display a high degree of volatility. From 1982 to 1985, share prices (in US dollars) on the Brazilian stock market rose fivefold. Two years later, they fell more than 28 per cent of their 1985 value. In the first nine months of 1987, share prices on the Mexican stock market rose six-fold. Following the October crash, however, prices fell to a tenth of their previous level (Singh, 1992). In Turkey between 1992 and 1993, share prices rose four-fold. The next

year they fell by 50 per cent. This link between short-term capital flows and stock markets increased the potential for further crisis. Because the return on investments depends largely on the movements of the exchange rate, serious shocks experienced by these countries that caused a devaluation in their currency triggered a sharp decline in equity prices and an outflow of capital (Akyüz, 1995).

Short-term capital flows are now considered the double-edged sword of economic development. On the one hand, they tend to create an environment that enhances and increases the efficiency of the domestic financial markets via intensified competition. On the other, however, evidence also suggests that short-term capital speeds in and out of developing countries for reasons not always related to their discretionary monetary policies. As a result, countering positive expectations such as increased efficiency in financial markets, short-term capital flows are likely to result in a number of equally detrimental consequences. First, they tend to increase financial fragility. Second, they increase the interest rates and inflate financial asset prices, causing stock market bubbles to emerge. Third, they create contractions in the real economy that have real consequences for employment. Fourth, they worsen the income distribution. Fifth, they reduce a government's ability to conduct monetary policy.

The Turkish economy experienced its first major financial crisis in the first quarter of 1994. One of the best-performing emerging stock markets in 1993, the Turkish stock market suffered huge dollar losses during this period, owing to a 65 per cent devaluation in the Turkish lira. The Istanbul Stock Exchange Composite Index fell 50 per cent in dollar terms as volatility of capital markets and political instability further reduced confidence in the lira, despite efforts to reduce Turkey's current account, budget, and trade deficits. The currency crisis led to implementation of an austerity programme in April 1994, the aim of which was to restore confidence in the Turkish lira and establish a clear commitment to reducing fiscal and external imbalances by reducing government spending and slowing down rapid inflation. Several unpopular measures were adopted, including higher taxes and state-controlled prices, a speed-up of the privatization programme, and a further devaluation in the lira. The central bank intervened in the foreign exchange market, and between January and 5 April it used over $3 billion (about half of its year-end 1993 reserves) to support the lira. Between the end of 1993 and the end of April 1994, the value of the lira fell by 60 per cent in nominal terms against the US dollar.

In part, the currency crisis was a result of deteriorating macroeconomic fundamentals that were rooted in public sector imbalances, but to a large

extent the crisis can be traced to unsustainable growth in current account deficits as a result of short-term capital inflows.

The main objective of this chapter is to analyse the determinants of speculative short-term capital flows and their consequences on various aspects of the Turkish economy during the recent financial liberalization experience. First, in Section 5.2, we briefly examine the main motivation behind attempts at liberalization by returning to the structure of the economy prior to liberalization. Then we discuss the evolution of the financial sector in Section 5.3, by looking at various aspects of the system. In Section 5.4 we highlight some of the consequences of financial liberalization, concentrating on the effects of short-term capital flows into the economy. In our conclusion, Section 5.5, we pull together the main characteristics of the liberalization period that led to the present financial instability.

5.2 FINANCIAL LIBERALIZATION IN TURKEY: A BRIEF HISTORY

Turkey's attempts at liberalizing its financial system began along with the structural adjustment reform programme initiated in 1980. Before then, the system revealed all the attributes of 'financial repression', with negative real interest rates, a high tax burden on financial earnings, and high liquidity and reserve requirement ratios. Overall, financial markets suffered from a highly regulated and inefficient banking system, with consequent low-quality portfolio management. Given the underdeveloped and fragmented nature of the capital and stock exchange markets, corporations had to over-rely on banking credits rather than issuing stocks to finance their working capital balances (OECD, 1988). The fiscal deficits were mostly financed by direct monetization through the central bank.

On January 1980, with the introduction of a comprehensive stabilization programme, the overall development strategy was reoriented from a highly regulated, inward-looking economy to that of an outward-oriented, open economy operating under market incentives. The major elements of the reform programme were the switch to a pegged exchange regime of continuous adjustments, elimination of price controls and phasing out of subsidies, and the gradual removal of trade restrictions towards full commodity trade liberalization. Many aspects of the Turkish structural adjustment have been well documented in Rodrik (1991), Nas and Odedokun (1988) and Aricanli and Rodrik (1990).

In retrospect, it can be stated that the mode and pace of financial reforms have progressed in leaps and bounds, mostly following pragmatic,

on-site solutions to the emerging problems. In the beginning, the major aim of the reforms had been the deregulation of the financial system, which had naïvely been expected to be sufficient to create a competitive financial structure more efficient over the previous one (Ersel, 1991). The first action undertaken was the removal of legal ceilings on deposit interest rates, which led to a fierce struggle among the banks and the broker institutions to attract funds from the public. This bonanza of fake 'Switzerlandization' was short-lived, however, and came to a halt with the emergence of the 1982 financial crisis.

The foreign exchange regime was liberalized early in 1984. Banks were allowed to accept foreign currency deposits from citizens and to engage in foreign transactions. Deregulation of restrictions on foreign exchange led to enormous pressures towards currency substitution. Such influences led to very high real rates of interest throughout the reform period, because the monetary authorities tried to defend the Turkish lira by increasing the real interest rate to improve the capital account. With full liberalization of the capital account, and the recognition of full convertibility of the lira in 1989, however, there has been a massive inflow of short-term capital into the domestic economy (Boratav *et al.*, 1995). Even though there was no officially stated exchange rate management policy during this period, the government seemed to use the exchange rate as the nominal anchor in trying to control the inflationary expectations. This policy led to an annual depreciation of the exchange rate below the inflation rate. For example, the extent of the real appreciation ranged from 33 per cent in 1990 to 2 per cent in 1992. In 1995, real appreciation was 15 per cent. Much as in the Southern Cone experience, however, this use of the exchange rate to attain the inflationary targets led to significant fluctuations in the real economy and was severely deflationary (see Dornbush, 1982; Diaz-Alejandro, 1985; Fanelli and Frenkel, 1993).

In the credit market, the central bank's control over commercial banks was simplified with a revision of the liquidity and reserve requirement system. An interbank money market for short-term borrowing facilities was enacted in 1986. In 1987, the central bank diversified its monetary instruments by starting open market operations. And in October 1989 it abandoned the use of rediscount facilities as an instrument of selective credit policy.[1] Finally, in early 1990 the central bank announced a new monetary program based on a new concept of controlling the stock of its balance sheet on both the assets and the liabilities sides, formulated as central bank money (CBM). To restrain the growth of CBM, the central bank signed a protocol with the Treasury to limit public sector borrowing requirements and monetization of the fiscal deficit.

In order to regulate and supervise the capital market, a Capital Market Board was established, and initiated the reopening of the Istanbul Stock Exchange (ISE) in 1986. To encourage equity financing, significant tax incentives were granted and, since 1986, all dividends and capital gains have been exempted from personal taxation.

The adjustment experience of the real sector to financial liberalization had been one of boom-and-bust cycles. As documented in Table 5.1, the post-1988 performance of gross domestic product revealed intensified short-term business cycles, with rates of annual growth ranging between 8 per cent in 1993 and –5.5 per cent in 1994. Following the production cycle, both consumption and investment demand fluctuated sharply over the same period. Similarly the external economy was in turbulence, with the balance on current account suffering from severe fluctuations between –$6.4 billions in 1993, and $2.6 billions in 1994, and again –$2.3 billions in 1995. The domestic rate of inflation reached the plateau of 70 per cent to 80 per cent per annum and displayed strong resistance at this threshold.

Given the Turkish experience, one can easily trace out the drastic impacts of the reform measures on the domestic financial markets and the ongoing trend towards financial deepening. Contrary to expectations, however, the public sector share in financial markets remained high. The financing behaviour of corporations did not show significant change, and credit financing from the banking sector and inter-firm borrowing continued. Furthermore, the share of private sector securities in total financial assets fell. Thus, the observed upward trend of the proportion of direct securities to GNP originated from the direct new issues of public sector securities and treasury bills. Because the commercial banking system has been the major customer of such securities, however, the share of aggregate security instruments fell in private portfolios. In fact, with the implementation of positive interest rates, and the new possibility of foreign exchange accounts, the advance of financial deepening for the private households has meant increased foreign exchange deposits with vigourous currency substitution. Thus, it can be stated that the 'pioneers of financial deepening' in Turkey in the 1980s have been public sector securities and foreign exchange deposits. As Akyüz (1990) attests, from this observation, Turkish experience did not conform to the McKinnon–Shaw hypothesis of financial deepening, with a shift of portfolio selection from 'unproductive' assets to those favouring fixed capital formation.

The process of financial deepening had matured by 1990. Total deposits in the banking system had risen from 18.6 per cent of the GNP in 1980, to 30 per cent by 1988 and have been relatively stable since then (Table 5.2). Signs of tension, however, were visible after 1990, when the degree of

monetization of the domestic economy was under scrutiny. Ratios of monetary aggregates M1 and M2 were found to be on a declining trend, whereas that of M2Y increased.[2] We observed that while the ratio of M2 to GNP had decreased from 21.1 per cent in 1988 to 16.6 per cent in 1995, that of M2Y had increased from 28.4 per cent to 34.3 per cent during the same period. This development hints at the decreased confidence on the domestic currency, and reveals the increased threat of currency substitution, which, combined with the threat of international speculative capital flows (hot money), would be the prime cause of the vicious cycle of high real interest rates along with currency appreciation.

The process of financial deepening was shaped directly by the financing needs of the public sector. Table 5.2 documents this episode. The new issues of securities by the state increased from 6.9 per cent of the GNP in 1988 to 20.3 per cent in 1995. On the other hand, issues by the private sector stood at 2.2 per cent of the GNP as of 1995. The state granted a series of incentives to the banking sector for holding its government debt instruments (GDIs). GDIs could be used as collateral and be held against the liquidity requirements. This process led to three important consequences: first and foremost, it substituted fiscal policy for monetary policy and hindered the central bank's capacity to conduct monetary policy; second, it enabled the Treasury to assume a monopoly power to regulate the distribution of domestic credit and crowded out the private sector; third, as a result of the sudden and unexpected changes in the issues of the GDIs through captive methods of liquidity requirements, it led to a highly volatile money multiplier.

5.3 STRUCTURE AND EVOLUTION OF THE FINANCIAL SYSTEM

The structure of the financial system prior to the liberalization episode can be summarized briefly by highlighting several of the main characteristics. First, there were ceilings on the interest rates for deposits and credits, and real interest rates were negative. This encouraged corporations to use excessive leverage, but to a large extent it caused the financial sector to shrink in real terms. Second, the reserve requirement ratios were relatively high, resulting in increased costs of bank intermediation. Third, there were no institutionalized capital markets. Fourth, public sector deficits were primarily financed through monetization. Because the money markets and government securities markets were not developed, the CB could not utilize financial market instruments for the

Table 5.1 Turkey: main economic indicators

	1988	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*
Annual change (%)								
GDP	2.7	1.2	7.9	1.1	5.9	8.0	–5.5	7.4
Consumption								
Private	1.2	–1.0	13.1	1.9	3.3	8.4	–7.5	11.8
Public	–1.1	0.8	7.9	4.5	3.8	2.3	–7.6	9.5
Fixed capital formation								
Private	12.6	1.7	19.4	0.9	4.3	44.1	–22.2	16.5
Public	–20.2	3.2	8.9	1.8	4.3	12.1	–31.6	–2.4
Exports (million US$)	11 929	11 780	13 026	13 667	14 891	15 611	18 390	21 975
Imports (million US$)	14 335	15 792	22 302	21 047	22 871	29 428	23 270	35 709
Current account (million US$)	1596	961	–2625	250	–974	–6433	2631	–2339
GNP per capita (US$)	1684	1959	2682	2655	2744	3056	2161	2732
Inflation rate (CPI, %)	75.4	64.3	60.4	71.1	66.1	71.1	125.5	78.9

Source: SPO main economic indicators. Central Bank of the Republic of Turkey, *Annual Report* (Ankara) various years. Undersecretariat of Foreign Trade and Treasury, *Main Economic Indicators* (Ankara) various years.

Table 5.2 Turkey: financial assets and monetary indicators (% of GNP)

	1988	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*
I. Securities by issuing sectors								
Public Sector	6.9	7.7	5.4	7.6	12.9	16.8	22.9	20.3
Government bonds	3.0	3.9	3.1	1.9	5.6	7.5	5.1	4.5
Treasury bills	4.0	3.3	2.1	5.4	6.9	9.0	16.7	15.8
Private Sector	0.9	1.0	1.0	0.9	2.0	3.5	2.2	2.2
Shares	0.3	0.4	0.5	0.6	0.4	0.4	1.0	0.6
Private bonds	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0
Assets backed securities	0.0	0.0	0.0	0.0	1.3	2.6	1.1	1.5
General total	7.8	8.7	6.4	8.5	14.9	20.3	25.1	22.5
II. Monetary indicators								
Currency in circulation	3.5	3.7	7.2	6.9	3.4	3.2	3.1	2.9
M1	8.8	8.5	7.9	7.4	7.1	6.5	5.9	5.2
M2	21.1	20.5	18.0	18.5	17.3	14.1	16.2	16.6
M2Y	28.4	26.6	23.5	26.5	26.6	23.7	30.7	34.3
Total deposits	30.3	27.8	24.7	27.4	27.8	24.5	31.7	28.9
Sight deposits	6.1	5.5	5.0	4.6	4.3	3.9	3.3	2.6
Time deposits	12.3	12.0	10.1	11.1	10.2	7.7	10.3	11.2
FX deposits	7.4	6.1	5.5	8.0	9.4	9.5	14.5	15.0
Reserve money	9.4	9.0	7.2	6.9	7.0	6.5	7.3	4.4
Volume of domestic credit	22.5	18.9	18.8	20.6	22.1	22.7	19.9	23.1

Sources: Central Bank, *Annual Report*; Treasury main economic indicators.
Undersecretariat of Foreign Trade and Treasury, *Main Economic Indicators* (Ankara) various years.

purpose of monetary control. Fifth, there were restrictions on the entry of foreign and domestic banks into the banking sector. Sixth, foreign exchange operations were significantly restricted. And finally, corporate financing was achieved through borrowing rather than equity financing. Commercial banks were the dominant financial institutions, and bank loans were the main instrument of financing. Under these structural conditions, liberalization measures were introduced to correct the balance of payments problems in an attempt to end financial repression and stimulate real economic growth.

The multiple aims of the 1980 Stabilization Programme were to reconstruct the economy by moving towards more of a market orientation, which would allow a far more efficient allocation of resources, so as to control the chronically high inflation rate, to improve the balance of payments problems through the reduction of current account deficit, to implement an investment policy to increase capacity utilization and the efficient allocation of resources, to establish a more realistic exchange rate policy to promote exports, to promote foreign investment and the inflow of foreign capital, and to have a credible public finance policy to increase tax revenues. To meet these goals, import substitution was replaced by export promotion, opening the economy to foreign capital flows.

During the same period, financial reform measures were introduced in an effort to promote financial market development through deregulation and competition. The strategy was to make entry into the banking sector easier, so as to increase the role of the financial system in promoting growth. Significant structural changes in the financial system followed from the these measures, especially during the second half of the 1980s.

The Banking System

The banking system, generally, viewed the implementation of the financial liberalization programme as benign, and made an effort to accommodate its measures. Banks began to modernize themselves, by adopting new technologies in their operations. The liberalization of interest rates and the foreign exchange regime, along with the entry of new domestic and foreign banks, increased competition in the banking sector. In this new environment, efficient supervision became an important issue in the maintainance of the safety and soundness of the banking system. Some measures pertaining to the adequacy of capital were introduced to strengthen banks' capital structures. The minimum amount of a bank's required capital was raised from 25 million to 5 billion Turkish lira in 1988. In addition to the minimum capital requirement, a capital adequacy ratio was

established to minimize the risks of a bank's assets. In 1992, the capital adequacy ratio was increased to 8 per cent, by using BIS guidelines to determine primary and secondary capitals and risk weights. Firms with low equity/debt ratios were unable to pay their debts, resulting in an accumulation of non performing loans in the banks' portfolios. Because there were no legal obligations, the classification and provisioning of non-performing loans were at the discretion of the banks. In 1986, through an amendment to the Banking Law, the government issued a decree for provisioning, requiring banks to keep specific loan loss reserves as well as general reserves for their loan portfolios. Although the practice was not in accord with international practices, this can be seen as a first attempt to require banks to classify and keep reserves for their past due loans. The rates for provisions were very low. In May 1988, a new decree on loan classification and provisioning was put into effect, based primarily on the creditworthiness of the borrowers.

After the initial implementation of the financial liberalization measures, in addition to on-site examinations, the establishment of an effective off-site supervision system became an important objective of the regulatory authorities. Therefore, all banks were required to use a uniform chart of accounts. Another important measure of supervision of the banking system was the independent auditing of banks. Reports from independent auditors were evaluated to assess banks' strengths and weaknesses.

All these measures were aimed at increasing the efficiency of supervision and led to more transparency of banks' financial statements.

In 1983, to protect depositors against possible bank failures and to increase the public's confidence in the financial system, the Savings Deposit Insurance Fund was established. The coverage of insurance was limited to saving deposits only. The law authorized the Treasury to liquidate or rehabilitate problem banks.

Developments in the banking sector throughout the liberalization period can be summarized as follows (Akkurt *et al.*, 1992):

(1) The banking system was strengthened by establishing prudential regulations in line with international practices and guidelines. The standards for loan classification and loan-loss provisioning helped in identifying and classifying non-performing loans. Besides these standards, the banks have been required to fulfill the risk-weighted capital adequacy ratio, which was 8 per cent in 1992.
(2) The soundness of the system was also enhanced by improving the on- and off-site supervision, establishing an independent auditing mechanism, and making uniform accounting practices.

(3) The banking system has developed as a result of the introduction of new markets such as the foreign exchange and gold markets; and improvements in capital markets through refined instruments, liberalization of the foreign exchange regime and interest rates, reduction in the volume of preferential credits and more effective taxation of financial intermediation. The liberalization of the foreign exchange regime created an opportunity for the banks to increase their profitability by mobilizing foreign exchange funds while increasing the tendency for currency substitution.
(4) The central bank played a leading role in the reduction of the volume of preferential credits that had created an obstacle to increasing the efficiency of the banking system. The rediscount facilities for preferential credits were terminated, and the banks have been allowed to use the discount window only for their liquidity requirements at a rate determined by the CB.
(5) Distortions in the efficiency of the banking system, caused by high taxation on financial intermediation, were reduced to some extent by lowering the reserve requirement ratios.[3]
(6) Despite the rapid growth of non-financial economic institutions throughout the liberalization period, the banking sector remained as the main contributor to fund mobilization.
(7) Owing to their rapid growth, most of the new financial instruments were introduced by these institutions.[4]
(8) The share of banks in the secondary markets of these instruments amounts to 90 per cent. Additionally, the predominant financial instruments are bank deposits and government securities.

A closer examination of developments in the banking system, however, reveals that its growth was neither smooth nor completely in line with the liberalization programme.[5] There was a decline in concentration measured by the share of the five largest banks in total assets. For example, concentration for the five largest banks declined from 69 per cent in 1980 to 52 per cent in 1995. Similarly, the concentration for the largest ten banks also declined from 88 per cent in 1980 to 76 per cent in 1995. During the same period, the share of government securities in the banks' portfolios increased.[6] There also was an increase in the banks' capitalization. And as a result of opening the economy, commercial banks' share of claims on and liabilities to non-residents increased after 1986. Since then, total domestic credit as a percentage of GNP declined while banks' profitability increased. After 1986, the role of foreign banks in promoting competition in the banking sector was negligible.

Capital Markets

The liberalization process was initiated by the creation of legal framework for the enactment of the Capital Market Law in 1981. This was followed immediately by the establishment of the Capital Market Board in 1982 as the supervisory and regulatory authority to ensure the functioning of the market.[7] Besides the supervisory and regulatory functions, the Board was also given the authority to develop the markets themselves. The distinguishing feature was that the Board had the authority to set the framework and then to amend its regulations according to changing market conditions.

Between 1982 and 1986, the infrastructure of the markets was almost completed. The main principles for the financial intermediaries and for the scope of their operations were set, the instruments were defined and the rules for issuing securities were specified.

A new law was enacted in 1992 to lay the foundation for a market-determined financial innovations process. The scope of authority of the Board was enlarged and financial innovations were made easier in terms of the development of new instruments and institutions by the market itself.[8] The principal measures that were taken can be summarized as follows (Sak, 1995):

(1) Instruments of direct finance were defined by the Board. Disclosure requirements were set and conditions required from the issuers of securities were defined,[9] while merit regulation principles were adopted.[10]
(2) The roles of banks and non-bank financial intermediaries in the securities markets were specified, leading to an acceptance of the universal banking system. Banks were allowed to undertake all kinds of financial market activities without requiring any additional licensing.
(3) The Istanbul Stock Exchange (ISE) was established in 1985 as the secondary market of securities and became operational in 1986. Fiscal incentives were granted to bring all trading on corporate stocks under the auspices of the ISE. After 1989 the ISE became large enough to attract foreign investors and to absorb the issue of shares of large SEEs for privatization purposes.[11] The Board has acted not only as a regulatory authority but also as a leading innovator for the whole industry, with a special emphasis on investor protection.

5.4 DETERIORATION OF THE FISCAL BALANCES OF THE STATE

The post-1980 period witnessed the rapid deterioration of the fiscal position of the state. As Table 5.3 documents, the major breakdown has

Table 5.3 Turkey: public sector balances (real 1987 prices, billions TL)[a]

	1988	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*
Tax revenues	10 455.0	11 702.6	13 255.3	13 078.0	14 543.4	15 647.6	14 313.5	13 589.5
Direct	4 037.6	5 076.7	5 625.7	5 621.9	6 110.2	6 346.2	6 165.4	5 172.5
Indirect	6 417.3	6 625.6	7 629.6	1 134.0	8 433.1	9 301.4	8 148.1	8 417.0
Factor revenues	4 675.6	3 959.8	2 690.4	512.8	–66.1	570.2	696.5	1 745.5
Current transfers	–6 160.8	–6 167.9	–5 629.2	–4 925.0	–5 666.6	–8 150.7	–8 044.8	–8 911.7
Public disposable income	10 001.1	10 499.0	11 517.5	9 497.0	9 559.8	8 489.8	7 015.9	7368.4
Public savings	5 038.8	3 742.5	2 871.5	347.7	–849.1	–2 444.3	–1 267.3	–283.0
Public investment	6 232.0	5 885.8	7 502.4	6 029.0	5 509.5	6 207.5	3 179.3	3023.6
Public saving – investment balance	–1 193.3	–1 796.0	–4 630.9	–5 675.6	–6 358.6	–8 651.8	–4 446.5	–3 306.6
Ratios to GNP (%)								
PSBR	4.6	5.2	7.4	10.3	10.6	12.1	7.5	5.4
Budget deficit	3.0	3.3	3.1	5.3	4.3	6.9	3.5	4.2
Non-interest primary budget	–0.4	0.6	0.5	–1.5	–0.6	–0.9	3.8	3.4
Interest payments on:	3.7	3.6	3.5	3.8	3.7	5.8	7.7	7.5
Domestic debt	2.4	2.2	2.4	2.7	2.8	4.6	6.0	6.2
Foreign debt	1.4	1.4	1.1	1.1	0.9	1.2	1.7	1.3
Personnel expenditures	3.8	5.4	6.7	7.8	8.5	8.5	7.0	6.5

[a] Deflated by the CPI.

Sources: Treasury main economic indicators.

Boratav, Turel and Yeldan (1995, Table 11).
CBRT, *Annual Report* (Ankara) various years.
State Planning Organization, *Main Economic Indicators* (Ankara) various issues.

occurred in the flow of factor revenues generated by the state economic enterprise system and in the rapid rise of the transfer expenditures. Factor revenues declined by 4.6 trillions TL in real 1987 values in a period of four years from 1988 to 1992. Even though there had been modest improvements in tax revenues, the surge in transfer expenditures overran such gains. Likewise, the capacity of the public sector to generate savings was eroded severely and turned negative after 1992. The aggregate disposable income of the public sector fell by 30 per cent in real terms between 1988 and 1995 and the savings – investment gap widened nearly four-fold.

All these developments led to a sharp increase in the public sector borrowing requirement (PSBR), which increased to as much as 12.1 per cent of the GNP in 1993, just before the outbreak of the 1994 economic crisis. The state has resorted to a massive operation of domestic debt financing by way of new issues of debt instruments. As a result, the stock of domestic debt grew rapidly, to reach 20 per cent of the GNP by the end of 1995. The interest payments on domestic debt increased from 2.4 per cent in 1990 to 6.2 per cent of the GNP in 1995, and as a result constituted an important mechanism of income transfer within the domestic economy. In this way, the Treasury assumed a regulatory role in redistributing the economic surplus in favour of financial rentiers, a phenomenon discussed more extensively in Yeldan (1995).

Another mode of finance for the state's fiscal operations has been the opening up of the domestic financial sector to speculative short-term foreign capital flows. Turkey completed the liberalization of its capital account in 1989 by deregulating all its capital movements in its balance of payments transactions. Since then, such flows have effectively displayed very high sensitivity to the net differential between the domestic and foreign interest rate and the rate of currency depreciation. In this situation, the central bank has lost its overall control over these two instruments; they have practically turned into exogenous variables controlled by the external financial markets. From the view of the domestic financial markets, liberalization of the capital account necessitated a higher rate of return on domestic assets, as compared with foreign currency (as given by the rate of nominal depreciation). The rationale for this link can be traced directly to the *threat of currency* substitution (dollarization and/or D-markization) of the domestic liquidity markets. Given this threat, the monetary authority had to assume a passive role against excessively high real rates of interest on domestic assets, coupled with an overvalued exchange rate. It is actually a misnomer to refer to the foreign exchange rate regime as one of *overvaluation*. In fact, it is the balance of payments accounts that yield such an equilibrium in the first place, because liberalization of

the capital account in the short-term capital transactions requires a commitment to high real rates of domestic interest exceeding the rate of currency depreciation. As this commitment stimulates more direct portfolio investments, domestic currency appreciates, inviting an even higher level of hot money inflows to the domestic economy.

All of these connections help to create an extremely unpredictable environment. The 1989–93 experience shows the serious problems confronting a developing economy than decides to move into full external and internal deregulation in the financial system under conditions of high inflation. 'The spectre of capital flight' becomes the dominant motive in policy-making and creates commitment to high interest rates and expectations for cheap foreign exchange. The links between these two policy variables and the real sphere of the economy, that is, investment in physical capital and the current account balance of payments, are deeply severed. When adverse impacts on the current account balance become excessively destabilizing, real depreciation seems imminent, which, however, needs to be matched by further upward adjustment in the rate of interest if currency substitution or capital flight is to be restrained. Even with all the necessary adjustments, the country may experience capital flight for reasons beyond its control. Instability in the rates of foreign exchange and also in interest rates creates feedbacks that lead the economy into further instability.

The elements of this process are displayed in Table 5.4. We report the net return on hot money in column 1. This return is calculated as the rate of difference between the highest nominal interest offered in the domestic economy and the rate of nominal depreciation of the TL. It yields a net return to a foreign investor who switches into TL, captures the interest income offered in the domestic economy and switches back to the foreign currency at the end-of-period exchange rate. The difference between the interest earned and the loss due to currency depreciation is the net earnings appropriated by the investor.

The returns on such speculative transactions are contrasted with the alternative international yields, summarized by LIBOR, in the second column. The inflows show high sensitivity to whether or not the domestic rate of return compares favourably with the LIBOR. Except for 1990 values, the net flows are observed to be of the expected sign. Net flows fluctuated widely, especially between 1993 and 1995, and caused drastic business cycles, with 1994 the worst economic crisis in the postwar republic's history.

Note, though, that one has to be aware of the *gross* magnitudes of such flows, rather than *net* amounts, because it is here that the destabilizing consequences of speculative short-term capital movements prevail. In

Table 5.4 Turkey: speculative short-term capital (hot money) flows and financial indicators (millions US$)

	Hot money flows[b]						*ISE Index*[c]					
	Return on Hot money[a]	*LIBOR*	*(1) Inflows*	*(2) Outflows*	*(3) BOP (1 – 2) + (3) Errors & omission*	*Aggregate net flows*	*TL base*	*US$ base*	*Inflation rate(%)*	*Annual depreciations rate ($, %)*	*Current account balance*	*Reserve at CB*
1988	–0.073	0.077			515	–1 766.00	374	120	75.4	66.1	1 596	2 307
1989	0.236	0.091			971	2 646.00	2 218	561	64.3	49.2	961	4 831
1990	0.293	0.082			–468	1 627.00	3 256	643	60.4	22.9	–2 625	5 972
1991	–0.038	0.058	57 116	56 633	948	1 431.00	4 369	502	71.1	59.9	250	4 918
1992	0.154	0.039	81 389	76 885	–1 190	3 314.00	4 004	273	66.1	64.7	–974	6 116
1993	0.045	0.034	142 501	134 282	–2 222	5 997.00	20 683	833	71.1	59.9	–6 433	6 213
1994	–0.316	0.051	97 892	103 575	1 769	–3 914.00	27 257	413	125.5	170.4	2 631	7 112
1995	0.199	0.066	101 190	97 766	2 275	5 699.00	40 025	383	78.9	53.8	–2 339	12 390

[a] $[1 + R)/(1 + c) - 1]$; where R: the highest rate offered by the banking system or government debt instruments (Boratav *et al.*, 1995); E: rate of depreciation of the nominal exchange rate.
[b] Flows of portfolio investments, FX credits of the banking system.
[c] ISE index (1986 = 100).

Sources: Boratav *et al.* (1995, Table 11); CB balance of payments statistics, May 1995, SPO, *Main Economic Indicators*.
Capital Market Board (1995) *Annual Report* SPO (1996) *Main Economic Indicators* (Ankara) (April).

columns 3 and 4 of Table 5.4 we report the gross inflows and outflows of hot money to the domestic financial markets for the post 1991 period (unfortunately such detailed data were not available for the previous period at the time of writing.) For our purposes, we define hot money as (1) the flows of portfolio investments; (2) the FX deposits of non-residents; (3) the FX credits brought by the banking system; and (4) the net errors and omissions from the balance of payments statistics (mostly to account for the so-called 'unrecorded' transactions).

We can see that the gross inflows grew rapidly from $50 billion in 1991 to reach $165 billion in 1995. This difference is almost the size of the overall Turkish GNP! Clearly, the domestic financial system is under severe pressure from the international speculative centres and is no longer in a position to generate an independent monetary and foreign exchange policy. Furthermore, those centres constituted the major reason for the short-termism and volatility of the real business cycles, led to increased fragility of the financial and the external position of the domestic economy and resulted in worsening the distribution of income. We now study these issues in more detail.

Short-Term Capital Flows Restrict the Independence of the Central Bank

With the opening up of the domestic economy to speculative foreign transactions, the monetary authority is bound to a passive role. Two of the most important tools of the central bank, rates of interest and foreign exchange, fall under the exclusive directives of the external centres, and, consequently, the domestic economy is trapped in the vicious cycle of high real interest rates and an overvalued domestic currency. To accommodate this process, the central bank is pushed into a passive role of foreign reserve administration and is forced to hold significant foreign exchange. Indeed, one of the most direct consequences of the hot money inflows was the massive buildup of international reserves of the central bank. Figure 5.1 depicts this relation using monthly data. On the right-hand scale of Figure 5.1, we display the movements of hot money inflows; on the left-hand scale, we trace the monthly position of the international reserves of the central bank. With a proper adjustment of the vertical scale, one can easily observe the striking comovement of the two variables over time. Rather than financing productive investments in the real sector, short-term capital inflows lead to a rapid buildup of the reserves of the monetary authority. This presents a serious contrast to the orthodox expectations, prognosticating a complementarity between

financial liberalization and the expansion of investment funds in the domestic economy. In this setting, the only proper role that remains for the monetary authority becomes that of monetary sterilization, so that the surge in the M2Y value of money supply is checked by restricting the *domestic* component, with a consequent rise in the domestic interest rates, and a recommencement of the cycle.

Short-Term Capital Flows Disassociate the Financial and the Real Sectors and Create Bubbles in the Stock Exchange Market

Another direct consequence of the speculative hot money flows pertains to the links between the real and the financial spheres of the domestic economy. Speculative flows, given their sheer size and volatility, lead to artificial bubbles in the stock markets than have no real foundation and end up inflating the stock prices. In theory, stock prices have to depend on the productive performance of the corporations. In principle, a well-functioning stock market should help the economic development process through (a) the growth of savings, (b) the efficient allocation of investment resources and (c) better utilization of existing resources, through the pricing process (Singh, 1992). Nevertheless, with the inflows and outflows of speculative capital that are almost the size of the national product, all financial returns are inflated and an artificial burst on nominal values is created. Figure 5.2 portrays this process succinctly, where we plot the monthly *gross* speculative inflows on the left-hand scale and plot the Istanbul Stock Exchange Index (ISE, 1986=100) on the right-hand axis. The evolution of the bubble is clearly visible, starting from March 1993, where the ISE Index accelerates along with the intensification of hot money flows. Such bubble–burst–bubble performance of the stock market is clearly dissociated from the real production capacity of the economy. Rather than enhancing the aggregate credit volume, it reveals itself as the major cause of the economic crisis.

The analysis showing that short-term hot money flows have destabilizing consequences for the process of financial deepening can also be augmented by an analysis of the volume of securities market transactions (Table 5.5). In 1995 aggregate volume of trading in ISE market reached $52.3 billion of which $16.5 billion were government securities. Thus, with this volume, the stock market stood very shallow, given the magnitude of hot money flows. The secondary market transactions volume, on the other hand, can be observed to be have been more vivid, totalling $410 billion. Almost 98 per cent of such securities traded belonged to the public sector. Thus the episode of hot money inflows should be interpreted, in the

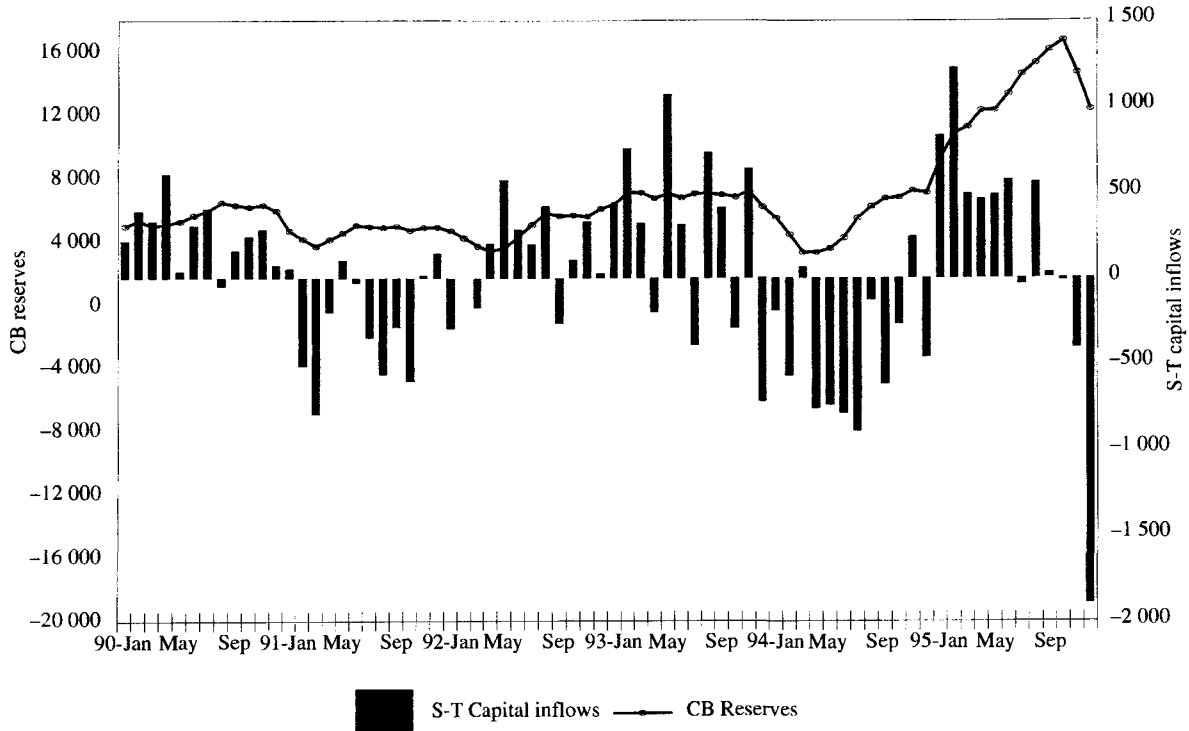

Figure 5.1 Turkey: short-term net capital inflows and central bank reserves (million US$)

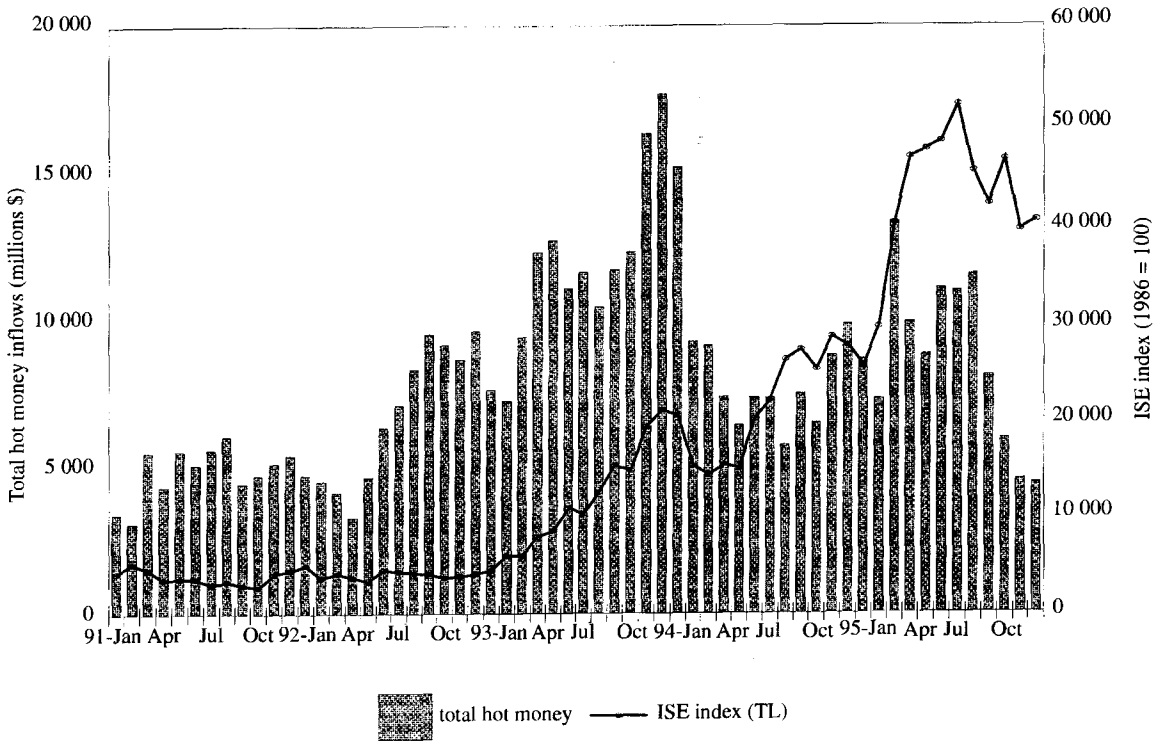

Figure 5.2 Turkey: speculative hot money inflows and ISE index

Turkish context, as the long arm of fiscal policy, overcoming the credit and monetary constraints of the monetary authority.

The availability of such funds enabled the fiscal authority to postpone any adjustment in its revenue-enhancing capabilities, such as the implementation of added taxes on capital earnings and the reduction of evasions on taxable corporate earnings. Yeldan (1995) discusses this stance in terms of a discretionary surplus redistribution strategy on the part of the state via its fiscal policy. Through the availability of short-term borrowable funds, the state has become a viable apparatus to generate an economic surplus for corporate incomes by way of a lax attitude towards tax evasion and the consequent deficits.

Acting in this way, the Treasury offered market yields on its instruments and thereby became the dominant agent in the financial economy. Table 5.6 contrasts returns on deposits and GDIs of different maturities. GDI yield returns are seen to be more favourable in most instances.

Short-Term Capital Flows Increase External Fragility and Lower Creditworthiness

Another consequence of hot money flows concerns the creditworthiness of the recipient country. Although the composition of external borrowing has

Table 5.5 Turkey: main indicators in securities markets (million US$)

		Istanbul Stock Exchange trading volume		*Secondary market transaction volume*		
	Number of firms	*Total*	*Government securities*	*Private*	*Public*	*Repo[a] rev-repo[b] trading volume*
1988	79	115		1 075	7 295	
1989	76	773		2 001	15 210	
1990	110	5 854		7 359	37 000	
1991	134	8 502	312	3 139	66 873	
1992	145	8 567	2 403	2 305	88 771	
1993	160	21 771	10 717	3 719	157 861	4 794
1994	176	23 202	8 828	4 941	180 587	23 704
1995	193	52 357	16 509	6 003	404 643	123 254

[a] Repurchase
[b] Reverse Repurchase

Sources: Capital Market Board, 1995; SPO, *Main Economic Indicators*, April 1996.

Table 5.6 Turkey: interest rates on deposits and government debt instruments

	Deposit interest rates				*Treasury bills*			*Government bonds*
	1 month	*3 months*	*6 months*	*12 months*	*3 months*	*6 months*	*9 months*	*1 year*
1991	58	69.6	64.8	72.7	68.4	66.8	68.9	68.8
1992	57.6	69.1	69.5	74.2	74.4	73.9	73.3	75.4
1993	52.9	64	69.1	74.7	69.8	73.3	80.1	86.3
1994	61.8	77.3	81.1	95.6	101.3	111.9	84.9	117.0
1995	83.7	83.9	84.4	92.3	68.4	102.1	83.2	99.8

Source: SPO, *Main Economic Indicators*, various issues.

changed dramatically relative to the debt crisis period, several creditworthiness indicators show that foreign investors have been continuously lowering Turkey's creditworthiness. This is associated with the unstable economic environment caused by continuous speculative capital flows.

Creditworthiness is associated mainly with balance of payments problems, the likelihood of devaluation, and overall economic and political stability. All of these indicators have been extremely volatile in the 1990s. Looking at total debt outstanding as a percentage of export earnings, it is clear that this indicator was extremely high for Turkey during 1988–95. Just to make a comparison, at the height of the debt crisis, in 1982, Mexico's ratio of debt outstanding to exports was around 236 per cent, while during the same period the same ratio for Turkey was around 200 per cent. In 1993, this ratio for Turkey was 431 per cent.

The volatility in the current account balance is another indicator of creditworthiness and fragility. Table 5.1 shows that the current account balance for 1993 was –$6433 million, for 1994 $2631 million, and for 1995 it stood at –$2339. Another interesting indicator is the ratio of short-term debt to total debt. In 1993, short-term debt was around 28 per cent of total debt. In the following year, it fell to 17 per cent and in 1995 it rose to 27 per cent in 1995. These fluctuations were exclusively the result of short-term capital flows that led to intensified financial instability in the domestic economy.

Short-Term Capital Flows Increase the Volatility of Business Cycles and Worsen the Income Distribution

With disassociation of the financial from the real economy, hot money inflows lead to more intensified fluctuations in real output in a shorter time span. The post-1993 experience is indicative of this observation. The fourth quarter of 1993 saw conditions in Turkey at their most fragile, with currency appreciation and the consequent current account reaching unprecedented levels. With the sudden drainage of short-term funds at the beginning of January 1994, the production capacity contracted. Industrial output fell continuously throughout that year. Together with this contraction, the post-1993 crisis management has given rise to significant shifts in the income distribution and intensified the ongoing transfers of economic surplus from wage-earners and industrial/real sectors towards the financial sectors. Real wages fell rapidly to 25 per cent in just two years. Likewise, dollar-denominated wage costs decreased and enabled export earnings to rise. In this manner, Turkey once again has switched its mode of surplus extraction from the domestic economy back to the exporting sectors.

5.5 CONCLUSIONS

The integration of the Turkish economy into the global financial system through financial liberalization and privatization has been a mixed blessing. Even though the main motive behind financial liberalization was to restore growth and maintain stability through increased efficiency and savings, it created financial instability. The inflows of short-term capital were not used to create new and productive investments, but instead simply created new dollar obligations for which there is no clear source of repayment. It has also intensified the already existing problems such as budget deficits, monetary instability and market distortions. In short, relying on short-term capital flows proved to be detrimental to the health of the economy.

The 1989–95 experience shows the serious problems confronting a developing economy that moves into full external and internal deregulation of its financial system under conditions of high inflation. The spectre of capital flight became the dominant motive in policy-making and created unsustainable commitment to high real interest rates and expectations of cheap foreign exchange. Meanwhile, links between the financial sector and the real sector have been severed. Instability in the rates of interest and foreign exchange created feedbacks that led the economy further into instability.

During the same period the fiscal position of the state deteriorated rapidly as factor revenues declined. Likewise, the capacity of the public sector to generate saving was eroded. The state has resorted to a massive operation of domestic debt financing by issuing new debt instruments. As a result, the stock of domestic debt has grown very rapidly. The interest payments on domestic debt also reached high levels during the same period and constituted an important mechanism of income transfer within the domestic economy.

The threat of currency substitution surfaces with the liberalization of the capital account, necessitating a higher rate of return on domestic assets as compared with foreign currency. As a result, the monetary authority has had to assume a passive role against excessively high real interest rates on domestic assets coupled with an overvalued currency.

The overall Turkish experience also showed the problems and limits of financial liberalization by relying on the exchange rate as a nominal anchor and riding on short-term capital inflows to finance deficits. Such a stabilization programme is often attractive for governments, because it avoids politically unpopular and painful measures. Its chances of success

are also high in the short run, because financial markets tend to be short-sighted. The issue is not whether capital flows are good or bad, but rather the challenge they pose to the state's ability to make sound and credible macro and micro policy that would ensure that such capital flows are directed toward the promotion of long-term growth, economic development and social equity.

Notes

1. To implement monetary policy, the central bank started to construct a programme and set monetary targets for the first time in 1986. The monetary programme continued to be implemented in 1987 and 1988, but the targets were exceeded by substantial margins. In 1990 a new programme was announced in which the targeted variable was the lira liabilities of the bank, also known as central bank money.
2. As is known, M1 and M2 measure supply of money in domestic assets, whereas M2Y includes foreign exchange deposits.
3. Zaim (1995) shows that there have been increases in both technical and allocative efficiency in the banking sector.
4. These instruments include corporate bonds, commercial paper, profit and loss sharing certificates and equity stock.
5. See Atiyas, and Ersel (1994).
6. Banks' obligations to hold government securities against high liquidity requirements created a large market for government securities. In addition, public securities offered very high yields, which made them highly attractive.
7. The financial crisis in 1982 gave an impetus to create the Capital Markets Board.
8. New institutions, such as real estate investment companies, rating agencies, clearing and depository institutions, mortgage backed securities centre, were being regulated. Short sale, margin trading and repo became available by securities intermediaries.
9. This was the first attempt to define the contractual rights in the securities markets. Obligations were defined in the Commercial Code for corporate shares and bonds only. However, obligations in terms of disclosure requirements were first entered into the legislation during the reform process (Sak, 1995.)
10. Merit regulation leads the regulatory authority to specify interest rates at the end. However, after the financial crisis in 1982 there was serious concern about investor protection. The absence of rating agencies, independent auditing institutions, accounting standards and so on were considered imperative in accepting a system of merit regulation. In 1992 the Capital Markets Law was amended and disclosure regulation defined.
11. The capital market, however, has been dominated by public sector securities, because the financing of the deficits has been done largely by auctioning treasury bills and government bonds.

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6 Uruguay

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6.1 INTRODUCTION

This chapter reviews the financial liberalization reforms undertaken in Uruguay and their long-run effects. The reforms enacted in the 1970s created an institutional framework that has survived a deep recession and a severe financial crisis (1981–83), several negative external shocks (such as the debt crisis of the early 1980s) and the transition from the military dictatorship to democracy in 1985.

In the Uruguayan case, financial liberalization is neither a recent phenomenon nor an isolated reform. It was conducted in the context of a broader programme of economic reforms toward a market-oriented economy, similar to those implemented in the mid-1970s in other Latin American Southern Cone countries. The Uruguayan financial liberalization was a set of reforms that removed all restrictions on interest rates and on credit allocation to specific agents. The opening of the capital account and the deregulation of the foreign exchange market are also relevant, and impossible to disentangle from the deregulation of the domestic financial markets.

Section 6.2 outlines the contents of the reform and the economic evolution of the country in the period under study. Section 6.3 summarizes the main stylized facts in the evolution of financial markets and the changes in the regulatory framework. In Section 6.4 the long-run effects of financial liberalization are analysed. Section 6.5 is dedicated to the relations between macroeconomic policies and financial liberalization. Finally, Section 6.6 contains our conclusions.

6.2 FINANCIAL LIBERALIZATION MEASURES AND OVERALL EVOLUTION OF THE ECONOMY

The twenty years that preceded the financial liberalization reforms were characterized by economic stagnation and an upsurge in inflation

(Table 6.1). Controls on domestic interest rates caused a process of financial repression, with a sharp fall of the credit and deposit ratios to GDP. Financial disintermediation was aggravated by a major banking crisis in 1965.

The country experienced adverse terms of trade shocks in 1973–4. This prompted the military government, which took office after a *coup d'état* in 1973, to abandon government intervention. The financial market deregulation process started in September 1974 and lasted until 1979. The most significant policy measures were as follows:

(1) Gradual deregulation of interest rates, on both loans and deposits, by raising their legal maxima until their complete removal in June 1979. In fact, by 1977 the maximum legal rate was no longer binding. Deregulation of interest rates on dollar-denominated deposits was even faster.
(2) Abolition of exchange controls and adoption of full convertibility of national currency. Total freedom of capital movements was granted by September 1974. The opening of the capital account preceded the domestic financial market deregulation and was introduced all at once.
(3) Elimination of the restrictions on allocation of bank credit to specific sectors. This included the rediscount system, which was removed in June 1977, also as a means to control money supply. Promotional credit to exporting firms was initially increased, but was eliminated in 1979. In June 1976 all restrictions on the banks' foreign-denominated net asset position were also removed.
(4) Reduction of the minimum legal reserve requirements until they were eliminated in May 1979. Policies in this respect fluctuated: reserve requirements were increased from 1974 to 1978, and restored in November 1982, with the move to a floating exchange rate regime. This was the only liberalizing measure reversed.
(5) Relaxation of regulations on entry of new financial institutions, allowing in 1976 the operation of banking houses, and in 1981 lifting the prohibition of entry to new banks.
(6) Suppression of the so-called compulsory domestic currency 'legal tender' in March 1976, allowing real or financial contracts to be denominated in dollars or any other unit of account.

Along with financial reforms, trade liberalization started with the removal of non-tariff barriers to imports. In 1978 a tarrif reduction program was announced to gradually unify them, but it was halted in 1983.

Additionally, tax reforms were undertaken in 1972 and 1974, simplifying the tax system, introducing a VAT and reducing the distortions. Price deregulation was also considerable. Between 1974 and 1978, active export promotion policies were pursued.

After the reforms, the performance of the economy improved: GDP grew at 4.9 per cent annually from 1974 to 1980 and financial deepening increased, with high dollarization of assets and liabilities. From 1978 on wards a price stabilization programme based on the exchange rate as a nominal anchor reduced inflation, but real appreciation of the peso led to current account deficits. A recession started in 1981, and when capital inflows reversed, the exchange rate policy was unsustainable leading to a steep real devaluation of 120 per cent in November 1982 that triggered capital losses in dollar-indebted firms and fuelled a financial crisis. From 1982 to 1984 GDP fell by 13 per cent.

Although growth resumed during 1985–7, and the economy experienced several favourable external shocks, the late 1980s saw an upsurge in inflation and low growth. In 1990, after inflation rose to 130 per cent, a new exchange-rate-based stabilization program was launched. As a result, inflation receded slowly, falling to an annual rate of 40 per cent in 1994. GDP grew after 1991, led by domestic absorption, while domestic currency appreciated in real terms. A current account deficit emerged, balanced by private capital inflows. In 1990 Uruguay joined the customs union of MERCOSUR, and there were also further tariff reductions with respect to the rest of the world, which may be considered the main structural reforms of the 1990s.

6.3 STRUCTURE AND EVOLUTION OF FINANCIAL MARKETS

Evolution of the Financial Structure

In what follows we present briefly the institutional agents in the Uruguayan financial system, considering two main classes. The first is for public-owned banks and it includes the following:

(1) Banco de la Republica (BROU), a commercial bank also with development bank functions. It grants medium- and long-term loans to finance firms' investment, obtaining short-term funds as a commercial bank, and holds a monopoly of deposits from the public sector.
(2) Central Bank of Uruguay (Banco Central del Uruguay), founded in 1967.

Table 6.1 Uruguay: main macroeconomic indicators

Period	*GDP growth*[a]	*Private savings*[b]	*Gross investment*[b]	*Fiscal deficit*[b,c]	*Inflation*[a]	*Terms of trade (1983 = 100)*	*Current account*[b]	*Real exchange rate*[d]	*M1/GDP*[b]	*M2/GDP*[b]	*M3/GDP*[b,e]
1955–59	–0.4	10.0	12.6	0.7	14	159	–3.1	94	18	34	39
1960–64	1.3	13.4	11.5	2.0	24	164	–2.3	133	15	28	34
1965–69	1.6	14.6	9.2	3.4	63	174	2.2	134	15	20	24
1970–74	0.8	10.3	9.6	3.2	47	181	–1.5	111	15	21	22
1975	4.4	8.8	11.3	4.4	81	115	–6.2	119	11	17	20
1976	2.6	11.0	14.0	2.6	51	110	–2.2	99	11	18	26
1977	3.4	7.4	14.3	1.2	58	105	–3.8	101	10	17	28
1978	3.9	7.9	15.2	1.3	45	109	–2.5	98	11	18	30
1979	6.2	7.8	17.0	–0.2	67	111	–4.3	79	11	19	29
1980	6.0	7.5	17.3	–0.1	63	107	–6.5	72	10	21	30
1981	1.9	13.1	15.4	0.1	34	110	–4.5	72	8	24	36
1982	–9.4	16.8	14.4	14.7	19	110	–5.1	81	10	29	55
1983	–5.9	19.5	14.2	12.2	49	100	–3.5	108	7	22	43
1984	–1.1	17.8	12.1	8.9	55	99	–2.6	98	7	20	43
1985	1.5	14.9	11.4	6.8	72	95	–2.5	100	8	20	47
1986	8.9	14.0	11.2	5.2	76	112	0.9	96	8	20	47
1987	7.9	13.9	14.3	4.1	64	123	–1.8	98	7	17	43
1988	0.0	15.3	13.2	4.5	62	125	0.4	95	7	17	45
1989	0.5	17.2	11.3	6.2	80	122	1.6	98	7	16	52
1990	0.9	14.0	11.5	3.0	113	108	2.0	118	7	15	56
1991	1.9	11.0	13.0	1.8	102	111	0.4	106	7	14	51
1992	7.4	7.1	12.0	–0.3	68	114	–1.8	100	7	13	46
1993	2.5	8.5	13.3	1.7	54	124	–2.6	87	8	13	40
1994	4.2	8.8	13.1	2.8	45	134	–2.5	82	7	12	39
1995	–2.2	8.6	12.9	1.7	42	130	–2.7	84	7	12	39

[a] Annual rate in percentage.
[b] % of GDP.
[c] Since 1982 includes central bank losses, and since 1990 losses of government-managed banks.
[d] Trade-weighted average of real exchange rates with nine main trade partners, using wholesale price indexes.
[e] M3 is M2 plus savings and time deposits in foreign currency from residents.

(3) Mortgage Bank of Uruguay (Banco Hipotecario del Uruguay, BHU) that lends on terms from 15 to 25 years for housing purposes, indexing its assets and liabilities by an accounting unit (Unidad Reajustable, UR) linked to the aggregate nominal wage.

The second group is composed of private institutions including:

(1) Commercial private banks, which operate mainly with short-term loans and deposits, though they are not restricted from doing it in longer maturities. Since 1976, they have also performed offshore transactions.
(2) Banking houses (Casas Bancarias or Casas Financieras), which are not allowed to hold savings from domestic agents, take dollar-denominated deposits from non-residents and are oriented to offshore activities, but grant a significant amount of credit to residents.
(3) Financial cooperatives, which intermediate between their associates and have existed since 1972, growing in the 1980s as a result of mergers. Their share is significant only in the domestic currency loan market, particularly in agricultural and consumer credit.
(4) External financial institutions (Instituciones Financieras Externas, IFEs), allowed since 1989 to operate exclusively in offshore transactions.

Financial Repression

Uruguay offered in the 1950s and 1960s a clear case of financial repression. Nominal ceilings on interest rates and high inflation determined strongly negative real rates. A sharp disintermediation process took place, measured by the ratios of both credit and deposits to GDP. The banking system was reduced to a minimum, and in the second half of the 1960s financing outside the formal system flourished.

Though the banking system was shrinking steadily, the activity level did not fall in an order of magnitude comparable to that of the fall in financial intermediation. An explanation may be that the funds driven away from the banking system were redirected to informal credit markets or to purchases of foreign assets (as reflected by negative figures in balance of payments errors and omissions). Some degree of inter-firm or informal financing via larger firms' credit to customers and from suppliers allowed firms to continue their activity, although it was a less efficient intermediation. Evidence from firms' balance sheets shows that they resorted to extraneous means of financing such as unpaid taxes (Pascale

1978, 1982). Differences by firm size in access to bank credit indicate rationing in the credit market.

Financial Deepening, Portfolio Substitution and Dollarization

After two decades of strongly negative values, real domestic rates slowly increased after the 1974 reforms, though they did not turn positive immediately nor permanently.

The banking system recovered after the reforms (Table 6.2). Deposits grew steadily after 1974, while total credit did the same after 1975. The proportion of financial wealth held as bank deposits rose systematically after 1974 until the 1982 crisis.

It must be noted that there was no significant increase in private savings. Thus, the main source of financial intermediation recovery was the reallocation of the domestic private sector financial portfolio from foreign assets to bank deposits. The second source of the recovery were capital inflows, mostly from Argentina, part of which was channelled to offshore loans, while the rest helps to explain part of the domestic credit expansion.

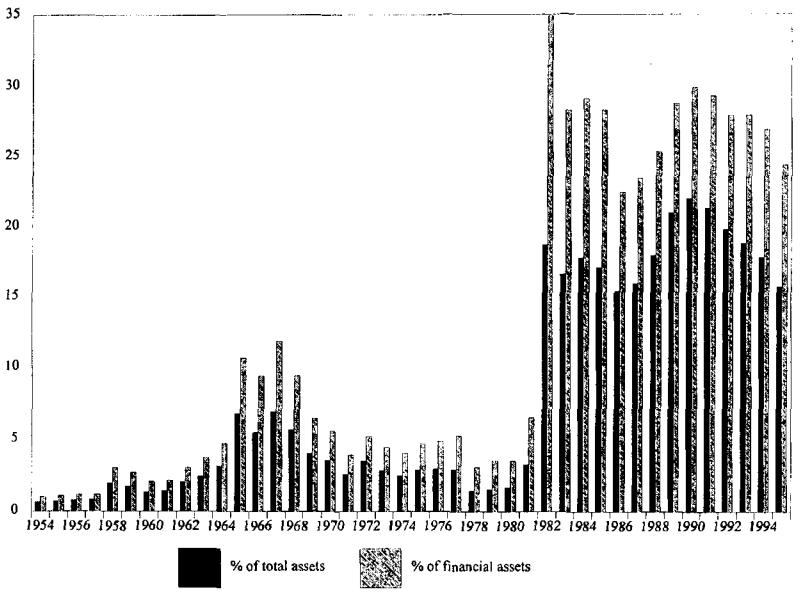

Figure 6.1 Uruguay: households' assets in foreign currency (%)

The financial intermediation recovery was carried out by increased dollarization of banking assets and liabilities. The proportion of dollar-denominated deposits rose, but the currency denomination structure of the household's financial portfolio (including foreign assets) was not significantly altered through the first years of the liberalization experience. Actually, dollarization of financial portfolios existed from the financial repression period on wards, as households had built up foreign assets via capital flight in the 1960s.

Table 6.2 Uruguay: credit to firms and deposits from households (in percentage of GDP)

	Banking credit to firms				*Deposits from households*			
Period	*Private banking*[a]	*Central bank*	*BROU*	*Total*	*Private banking*[a]	*BROU*	*BHU*	*Total*
1954–1963	21.2	0.0	8.7	30.0	15.8	3.9	0.2	19.9
1964–1973	9.7	0.2	6.5	16.5	5.7	1.7	0.7	8.1
1974	8.1	0.6	8.6	17.3	2.1	1.4	1.4	4.9
1975	8.9	0.8	8.3	18.0	2.3	1.7	1.7	5.7
1976	9.9	0.6	9.3	19.8	3.3	2.4	1.8	7.5
1977	13.7	0.2	9.3	23.3	4.5	2.7	1.6	8.8
1978	16.7	0.1	9.1	25.9	4.9	3.2	1.6	9.7
1979	21.3	0.1	8.3	29.6	6.0	2.9	1.3	10.1
1980	24.3	0.0	7.7	32.0	8.2	3.3	1.6	13.1
1981	24.6	0.0	8.4	33.0	12.5	4.4	2.1	18.9
1982	47.1	2.5	10.6	60.2	21.0	8.0	3.4	32.4
1983	30.2	9.7	13.7	53.7	16.3	7.4	3.4	27.1
1984	26.0	10.3	13.0	49.4	15.8	9.6	4.2	29.6
1985	22.5	8.2	14.5	45.1	18.5	13.0	4.7	36.2
1986	20.8	5.2	13.3	39.3	17.3	12.4	4.6	34.3
1987	18.1	4.0	11.9	34.0	16.2	12.9	4.5	33.6
1988	18.3	2.9	13.1	34.3	17.7	14.3	5.7	37.7
1989	15.9	0.3	13.5	29.7	22.1	17.0	6.8	45.8
1990	13.1	1.3	13.6	28.0	24.4	18.7	8.0	51.0
1991	11.3	0.3	11.1	22.7	21.5	17.2	7.5	46.2
1992	12.4	0.3	10.2	22.9	18.1	14.8	6.2	39.1
1993	11.6	0.2	9.1	21.0	14.9	12.6	5.7	33.2
1994	10.6	0.2	9.0	19.7	14.3	12.1	5.3	31.7
1995	12.9	0.1	10.8	23.8	13.5	11.9	5.8	31.2

[a] Includes private banks and banking houses.

Source: Estimated from central bank.

Dollarization of deposits led to dollarization of credit. In the years that followed, despite price stabilization attempts, dollarization of credit was not reversed, as shown in Figure 6.1.

A specific consequence of dollarization of domestic intermediation was to turn more fragile the whole financial system. Domestic households became net creditors, in dollars, of the banking system, and the banks in turn lent these funds to non-financial firms, keeping the same currency structure in their assets and liabilities. Non-financial firms accepted bank indebtedness in dollars, because it was the main credit source available to them, and assumed an exchange rate risk that they, specially those in non-tradable industries, were not facing before.

Another consequence of dollarization is that the leverage of firms became correlated with the real exchange rate. When the real exchange rate is below long-run equilibrium, the solvency of firm's as measured by leverage apparently improves, even though this is only a transitory effect.

As a result of the recovery of financial intermediation, the balance sheet data of firms show a relative loosening of the financial constraints after the liberalizing reforms, particularly for medium-size firms, which increased their leverage coefficients more than the larger ones. Firms' leverage increased immediately after the reforms and until the 1982 crisis.

Financial Crisis and Government Intervention

A crucial aspect of the Uruguayan experience was the 1982 financial crisis. After the recession started in 1981, signals of a crisis were given by the increase in non-performing loans of private banks. Lack of confidence in the exchange rate policy grew, and was reflected initially in an increase in the spread between interest rates in pesos and in dollars. This fuelled the recession, through its impact on the loan interest rates. When depositors switched from pesos to dollars, banks forced the firms to renew their formerly contracted loans in pesos for new loans in dollars. The firms' position became increasingly risky. Finally, in 1982, the preannounced exchange rate system was abandoned, which led to a substantial real devaluation. Insolvency of firms, aggravated by the capital losses arising from devaluation, led most of the banks to financial trouble.

The crisis led to a massive government intervention. First, the central bank bought from bankrupted nationally-owned banks their uncollectible portfolios for 413 million dollars (4 per cent of GDP) before the end of 1982, to improve their balance sheets so that they could be sold later. Four banks were sold to banks of European origin. Second, the central bank bought from local branches of international banks some portfolios of loans

(not necessarily nonperforming) in exchange for international credit in dollars granted by their headquarters, as the government needed to recompose its depleted international reserves. While these purchases amounted to 215 million dollars (2 per cent of GDP), the debt the central bank acquired totalled 540 million dollars (5.5 per cent of GDP). This was not destined in principle to rescue banking institutions, but the central bank actually incurred in considerable losses during the 1980s, as loan collection was virtually nil. Total portfolios purchased by the central bank were 11 per cent of GDP at the end of 1984. A third type of government intervention took place between 1985 and 1989. The main three nationally owned commercial banks were seriously affected by the crisis, and, though insolvent, continued their activity until they had severe liquidity problems in the mid-1980s. They were bought out by government agencies to clean up their portfolios and leave them in condition to be resold to the private sector. These banks, known as 'government-managed' (*bancos gestionados*), held almost 30 per cent of total private banking deposits.

Another area of government intervention was the several laws passed (the last of them in 1992) imposing compulsory debt restructuring and suspending the enforcement of judiciary sentences to bail out firms from bankruptcy. Firms' debts were rescheduled several times throughout the 1980s. This fact set an atmosphere of uncertainty over the value of collateral and the enforceability of contracts.

From 1982 to 1989 there was an overall contraction of the private banking system (total credit to private sector fell by more than 10 per cent of GDP), but it did not return to the levels pertaining in the financial repression. Less credit was provided, owing to increasing default risks from the recession period, and also for fear of government intervention impeding loan collection.

Total deposits, however, did not fall and, in fact, they even increased in GDP terms. The financial rescue by the central bank and public sector agencies might have been perceived as an implicit insurance on deposits. This helps to explain why banks kept on attracting funds.

Government Financing

Financial liberalization was associated with changes in government financing, basically related to the structure of public sector liabilities. In the years of financial repression, fiscal deficits were financed mainly through monetary expansion and foreign credit, while national-currency-denominated public debt was steadily shrinking. Dollar-denominated bills and bonds started to be issued domestically in 1968. From 1974 to 1976,

when high fiscal deficits were run, all dollar-denominated liabilities, and especially domestic bills and bonds, increased. These means of financing probably would not have been available without the financial liberalization.

As financial liberalization played a significant role in the creation of a domestic market for dollar-denominated bonds, it helped to ease the government's financial constraint after 1974, and reduced the urgency of fiscal deficit adjustments. It is a remarkable fact that even in the midst of the 1982 episode, a domestic financial market for public debt survived. Because of this, during the 1980s, when foreign credit was not available, fiscal crises did not lead to hyperinflation.

As in the case of non-financial firms, the government balance sheet position started to be correlated to the real exchange rate. As the public sector is a net debtor in dollar-denominated assets, it benefits temporarily from a real exchange rate that is below its long-run equilibrium level. This, however, has consequences particularly for the performance of stabilization attempts.

Structure and Performance of the Banking System

Financial liberalization in Uruguay was basically the liberalization of the banking system. Non-banking financial markets, that is, the stock markets, were not important, except as secondary markets for public debt.[2] Given the importance of banking markets, it is worth while to recall some basic features of their structure and evolution after liberalization. In Table 6.3 the main structural indicators by type of agent are shown.

There are three main periods in the banking system after financial liberalization: (1) the initial phase, which lasted until the 1981–3 crisis; (2) the adjustment period that followed this crisis and continued approximately until 1987, when the last nationally owned private bank fell; and (3) the period starting 1987 until the present.

The first stage is characterized by an increase in the number of institutions, in their branch network, the amount of funds intermediated and the development of an offshore segment of the market. Commercial banks could take deposits from abroad, but in 1977 the opening of banking houses specializing in offshore transactions (Figure 6.2) was authorized and their number grew.

However, the idea of promoting an international financial center was a low priority in the overall public policy strategy.[3] Uruguay became a regional financial centre in spite of itself, and mainly because of high capital flight from Argentina in those years. Evidence is given by the fact that offshore credit transactions, which increased after the mid-1980s, fell

Table 6.3 Uruguay: structure of financial system, by type of institution (1994)

	Publicly owned		*Private*			
	BROU	*BHU*	*Commercial banks*	*Banking houses*	*Cooperatives*	*External financial institutions*
Physical network						
Number of institutions	1	1	22	11	8	8
Branches	106	27	225	19	73	8
Personnel	5 685	1 740	4 940	n.a.	n.a.	n.a.
Loans (million USD)	1 756	1 774	2 333	326	219	200
National currency	450	1 774	444	4	98	0
Foreign currency	1 306	0	1 889	322	121	200
Deposits (millions USD)	2 161	836	4 098	872	246	333
National currency	246	410	535	0	94	0
Foreign currency	1 915	427	3 563	872	153	333

n.a. = not available.

Source: Central Bank.

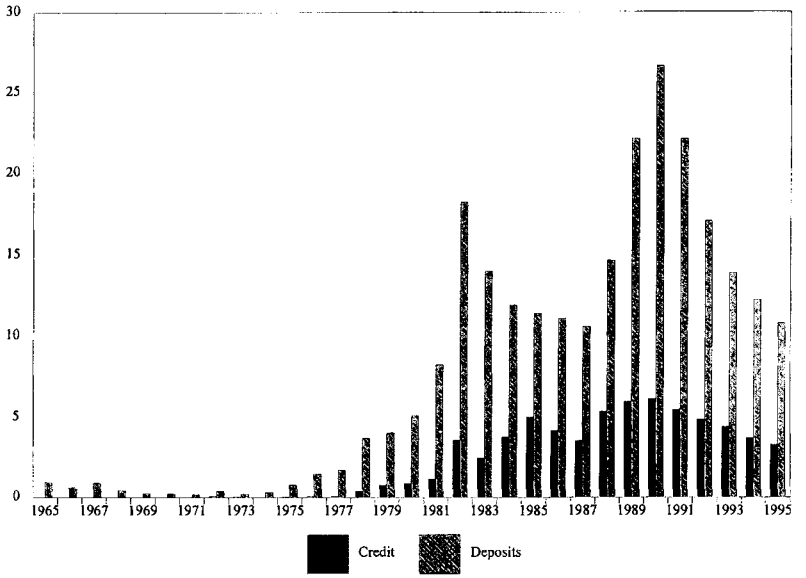

Figure 6.2 Uruguay: private banking offshore activity (% of GDP)

sharply after 1990. Behind these movements lie Argentina's financial system cycles, the origin of most offshore deposits.

The second period started with the 1982 financial crisis. As a result, by the end of the 1980s, all private banking institutions were foreign-owned, with the sole exception of the financial cooperatives (which were growing fast, but had a share of less than 2 per cent of total banking deposits). This structure of property was reinforced by an implicit licensing policy of the central bank, which restricted access to the banking system to international banks' branches. This would exempt it from being responsible for potential losses due to the insolvency of institutions. The physical network of the surviving private institutions contracted, a sign of the adoption of a 'wholesale' business strategy. This strategy implied increasing concentration in the private banking credit supply, particularly in corporate credit.

Meanwhile, in the aftermath of the crisis, public banks increased their share. From 1980 to 1990, BROU became the largest bank in the market, increasing its share in total deposits from 4 to 20 per cent of GDP, particularly in time deposits in dollars, and to a lesser extent in corporate credit (from 8 to 15 per cent of GDP). This can be explained by a relative lack of confidence in the private banking sector after the financial crisis, while

government backing of BROU's deposits made it seem relatively safer to the public.

The most recent stage, starting between 1987 and 1990, shows a reversal of the declining trend in the banking physical network, an expansion of consumer credit, but not of corporate credit, and a reduction in the public bank's share, particularly in the credit market. Even though there were significant capital inflows in this period, they were not channelled to the banking system. If we take the sign of errors and omissions in the balance of payments as an indicator of a decrease in foreign assets then its counterpart can only be domestic absorption expansion. This means at least partial improvement in the firms' balance sheets, which is consistent with data reported by Pascale (1993, 1994), because the government was then reducing its net liabilities.

After two decades of financial liberalization, the main problems of the banking system may be summarized as follows:

(1) The relatively small role of private national agents in the ownership of institutions. The main explanation is related to the private national bankers' structural vulnerability to financial crisis in a context of high dollarized intermediation. As the crisis implied important capital losses to banks, their viability depended on equity contributions. However, in the midst of a balance of payments crisis, those contributions could not come from a domestic credit expansion from the central bank. Therefore, rescuing these private national banks needed a mix of increased foreign indebtedness of the central bank and their sale to foreign banks. The above-mentioned implicit licensing policy also explains why entry of national agents after the crisis was nil.

This constitutes a problem, because as an almost general rule, private foreign institutions are more restrictive in credit granted to nationally owned firms (not in personal credit). This leads to credit market segmentation, particularly for medium-sized and small firms and sectors where foreign firms show little interest. The recent growth of financial cooperatives (from 1 per cent of total credit in 1990 to 4.7 per cent in 1994) may be seen as a market reaction to this increasing segmentation.[4]

(2) A high financial intermediation spread. This spread, about 35 per cent to 40 per cent in domestic currency credit, and 9 per cent to 12 per cent in dollar credit[5] to prime rate and non-prime-rate clients respectively, explains the high real loan rates, since real deposit rates have been negative or slightly above zero. In Figures 6.5 and 6.6 are shown the evolution of the BROU and private banks spreads, net of the financial cost of

mandatory reserves. The cost of mandatory reserve requirements explains only about 10 per cent of spreads in national currency. The high spread is due basically to the high costs of BROU and the lack of competition in the private banking sector. Evidence is provided by the fact that when in 1991 a series of implicit subsidies to the BROU were eliminated, it was forced to increase its spreads. Then, private banks followed that increase in the spreads without facing any additional cost (Figures 6.3 and 6.5), which can be interpreted as a rent-capturing situation by private banks with smaller costs.

Further evidence on the low degree of competition in the credit market is provided by Bergara and Cladera (1995), from an analysis of interactions in credit and deposit private markets at a micro level. They find that a competitive model cannot be accepted and that some degree of market power exists, in the sense of a finite price elasticity of demand at the banking firm level.

(3) The low development of the long-term credit market, particularly by private banks. Only public banks (BROU and BHU) constitute the long-term credit market. Just recently, in the 1990s, some private banks started to develop long-term lines, basically in personal credit to purchase of durable goods and real estate.

(4) The absence of a definite role for public banks. In contrast to their clear objectives during the financial repression period, the public banks' function is not well defined in the financial liberalization context. This is aggravated because as a result of higher public trust after the crisis their market share increased. There is an increased need to improve their efficiency and to define which market failure are they set to correct. In principle, in the Uruguayan case the lack of intermediaries catering for small and medium-sized firms or long-term credit may give a first approach to the answer, but high operative costs and lack of managerial skills prevent them from performing this function efficiently.

6.3 THE REGULATORY FRAMEWORK

Evolution of Regulations

Until the mid-1960s banking regulation was based on a 1938 Banking Law. This law provided neither deposit insurance mechanisms nor lender-of-last resort arrangements. It was also especially liberal regarding the

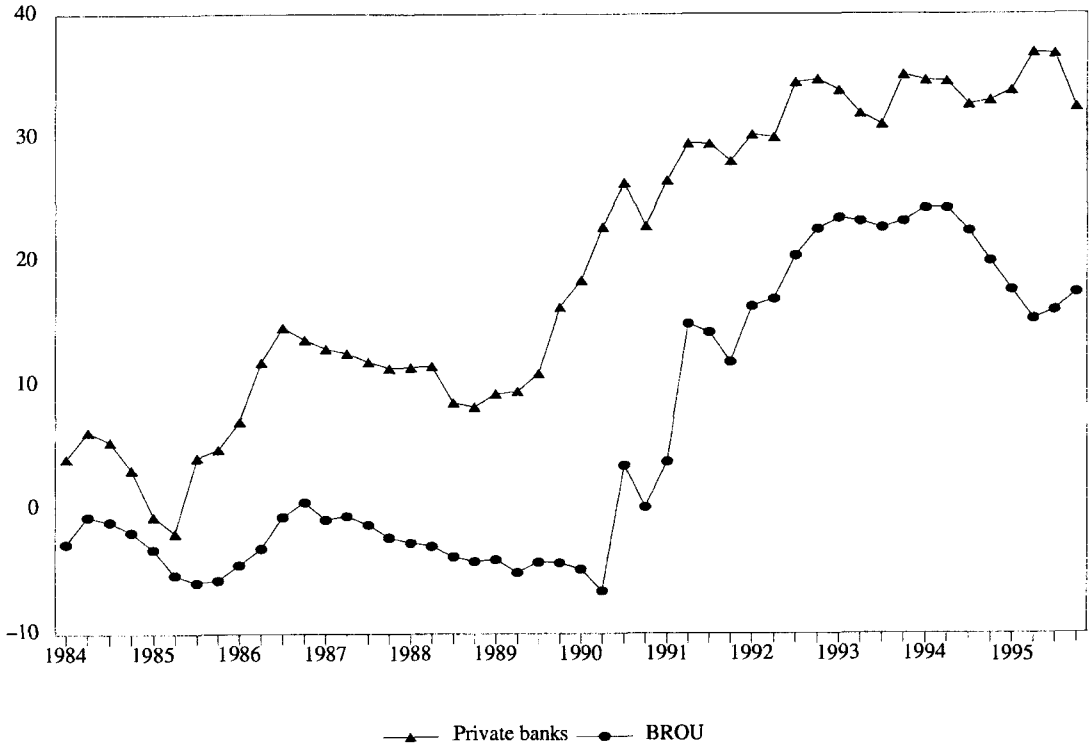

Figure 6.3 Uruguay: banking spread on domestic currency (annual percentage)

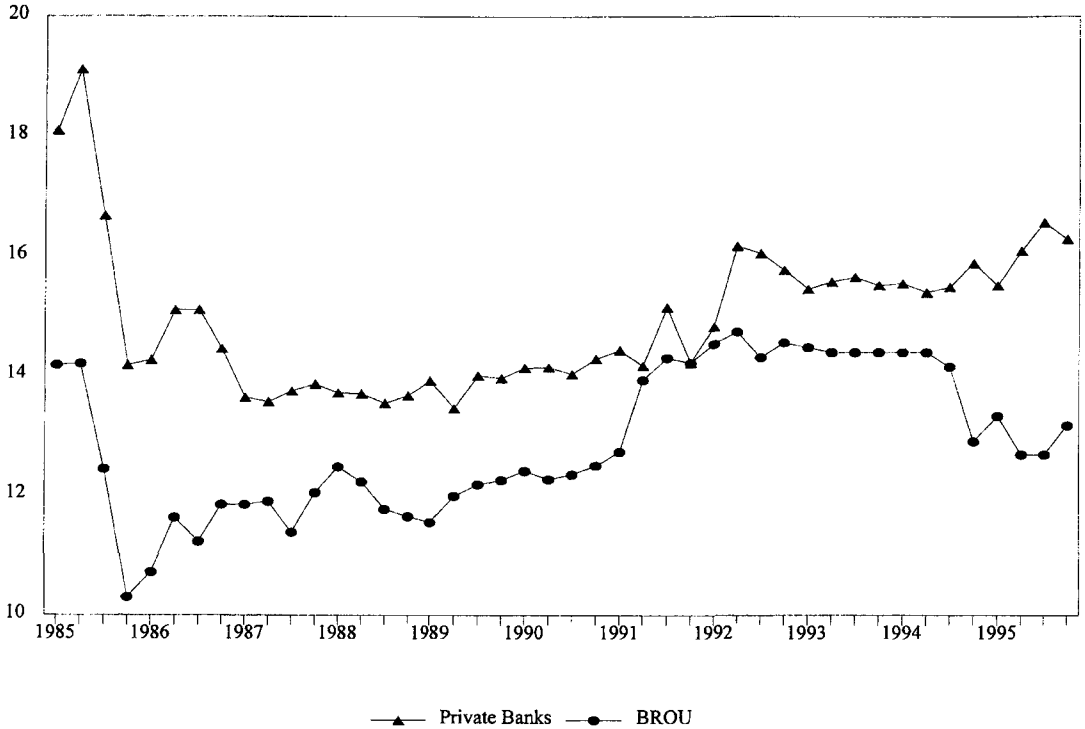

Figure 6.4 Uruguay: banking spread on dollars (annual percentage)

banks' portfolio structure. In practice, there were no limits to entry to the banking market. Furthermore, there was no central bank, and the monetary authority role was played by the issue department of the BROU.

As a reaction to the 1965 banking crisis, a deposit insurance scheme was established, but the fixed, peso-denominated ceilings on the amounts covered implied a rapid erosion of the effective coverage, given the inflationary environment. A set of measures were designed to decrease the high number of financial institutions and their physical network, which were seen as expressions of excessive competition. These measures include prohibitions of entry, official encouragement to mergers and acquisitions, a ceiling on the number of branches, and a ban on curb market subsidiaries. From an institutional point of view, an important innovation was the creation of the central bank in 1967. Despite the new regulations, new banking crises occurred in 1970 and 1971. The BROU purchased five bankrupted institutions that had a 27 per cent share of the credit market.

Financial liberalization modified the financial system regulation. All constraints on the allocation of loanable funds were lifted early. Regulations affecting credit concentration by debtor were also loosened, raising the maximum allowed ratio of credit to a single firm to the bank's net wealth. In 1979 all the restrictions were lifted, only to be re-established in 1980. The minimum liabilities-to-net-worth ratio was increased from 16 in 1974 to 30 in 1979. Only in 1981 was a programme approved to progressively lower this limit to 22 in 1984.

In 1977 the central bank revised the interpretation of the ban on entry, under the 1965 law, prompting the creation and rapid development of banking houses. In November 1981, the prohibition to establish new banks was finally replaced with a ceiling on the number of new entrant institutions, set as 10 per cent of the number of incumbent banks in the previous year. The 1982 Banking Law compiled the regulatory framework that emerged from the reform.

After 1989 new reforms were undertaken, aimed at strengthening the central bank's overseeing prerogatives and preventing the occurence of new crises. Prudential regulations and capital adequacy requirements were revised along the Basle Committee guidelines. The new regulatory scheme was gradually introduced between 1989 and 1993, in the context of structural adjustment agreements with the World Bank and the Inter-American Development Bank.

Shares were required to be nominative, and every transference had to be authorized by the central bank. The minimum net worth requirements were linked to the quality of the bank's assets. A compulsory classification of loans on the basis of their risk, a corresponding scale of provisions for

default, new capital adequacy requirements on the basis of a net-worth-to-risk-weighted-assets ratio, and a limit to credit concentration were established. The prohibitions of bank's holding of shares in non-financial activities were maintained. More analytic compulsory accounting standards were introduced, and banks were required to keep up-to-date and detailed individual debtor information.

In 1992, additions to the Banking Law of 1982 were made to counteract the generalized perception of an implicit insurance policy that was prompted by the central bank's behaviour during the financial crisis. The 1992 law stated explicitly that no government agency would be liable for any failure to comply on the part of any private financial institution. The law, however, has also allowed the central bank to grant financial assistance to threatened institutions up to their net worth.

The resulting scheme was not, in fact, one of absolute lack of any insurance mechanism. It must be kept in mind that state-owned banks held a very significant share of the overall amount of deposits, and all the commercial banks were then branches of international institutions, so the government and the international banks would act as *de facto* insurers in case of crisis.

The functions of the central bank were specified in its 1994 charter, and the maintenance of monetary stability was defined as its main, although not exclusive, objective. Though the lender-of-last-resort function scheme, stipulated in the 1992 law, was maintained, the elimination of any reference to financial assistance limits may amount to an authorization to bail out troubled private institutions. Hence, the 1994 charter allows for a perception of implicit deposit insurance ruled out in 1992. Less determined was the move toward greater independence of the central bank with respect to the Treasury. An ambitious package – including changes in the rules on board members' tenure, bank's duties and greater fiscal and monetary policy prerogatives – failed to pass Congress. Also removed from the original proposed charter were stipulations to increase the subordination of the rest of the state-owned financial institutions to the central bank. Quantitative ceilings on the amounts lent to the Treasury and more stringent interest rate parameters were defined to improve the central bank's ability to avoid financing fiscal deficits.

Though the legal norms on licensing and entry are dominantly those contained in the 1982 law, the central bank's discretionary decisions have become more relevant in recent years. The implicit rule seems to be that no new institution will be allowed to enter without significant support from well-known banking institutions established in industrialized countries.

Financial Crisis and Regulation

We may draw the conclusion that in each financial crisis the regulation scheme had only part of the responsibility. It has been argued that as deregulation of the economic aspects of the financial system proceeded, the absence of reinforcement of prudential regulations and supervision of the banking activity had a key role in determining the 1982 financial crash (Roldós, 1991; Roldós and Viana, 1992). Though measuring the extent to which this contributed to the financial collapse is difficult, it was an important element in aggravating the instability of the system as a whole. However, it seems clear that the causes of the crises, both in the 1960s and in the 1980s, are given by the coincidence of macroeconomic instability and laxity of regulation.

Before the 1965 crisis, the regulation scheme was enacted for more than twenty-five years without any disruption. Only in the late 1950s did the conjunction of inflation and fixed deposit interest rates stimulate more risky (and sometimes fraudulent) behaviour by the banks, at the same time as they became more vulnerable. Probably that behaviour might have been limited by better supervision rules, but the incentives provided by strongly negative real interest rates could hardly have been compensated completely. Changes introduced as a result of the 1965 crisis, seeking to explicitly limit competition, stimulating bank concentration and banning entry to the system, are important background for understanding the facts after financial reforms, especially the lack of competition in private banking.

Financial liberalization eliminated or made more flexible some prudential regulation items introduced in the 1960s. It is, however, difficult to claim that more stringent prudential rules would have avoided the consequences of the 1982 abandonment of the exchange rate policy – with a real devaluation that implied bankruptcy of firms – for the solvency of financial institutions. These consequences were generated by high exposure to exchange rate risk due to dollarization and strongly negative external shocks, combined with errors in macroeconomic policies management. The need for capital adequacy of insolvent institutions, even if anticipated, could not have been fully met through foreign-currency-denominated funding. Furthermore, in such a context, the regulatory authority would have been in a dilemma, because anticipating policy inconsistency would have reinforced lack of confidence in exchange rate policy.

These questions are also relevant in evaluating the ability of the new regulations against the ones in late 1980s should such events occur. However, under the present structure of property of the private banks,

the role of last-instance insurer of the system is played by the foreign headquarters of local branches, and not by the central bank. The role of the central bank would be limited to the state-owned banks. Taking into account the *de facto* rules excluding nationally owned banks from entry, prudential regulation along the Basle guidelines would be then redundant.

6.4 LONG-RUN EFFECTS OF FINANCIAL LIBERALIZATION

According to the McKinnon–Shaw perspective, three main effects are to be expected from financial liberalization: an increase in domestic savings, an increase in investment and an improvement in its quality. Here we review the results of some research on trying to measure these effects.

Financial Liberalization and Savings

The original liberalization literature predicted an increase in the savings ratio, once the real interest rates were allowed to reach their non-repressed market levels. However, such a positively sloped savings function was not explicitly derived from microfoundations, and standard models (as the simple life-cycle model of consumption) yield ambiguous results in this respect (see Deaton, 1992). A comparison of the savings ratio in Uruguay before and after the reforms shows no significant changes (Table 6.1), suggesting in a crude approximation that the McKinnon–Shaw predictions were not fulfilled in this case.

De Melo and Tybout (1986) find very limited sensitivity of private savings to the real interest rate in Uruguay. They conclude that the real exchange rate appreciation played an important role in discouraging savings throughout the 1970s. Furthermore, slight decreases in the private savings rate are observed immediately after the reforms, when absorption was stimulated by low real exchange rates.

Recent analysis suggests that liquidity constraints are relevant to explain the behaviour of aggregate private savings in Uruguay after 1955 (Noya *et al.*, 1996a). Empirically, this is reflected in a significant positive coefficient for income changes in a consumption function derived from a standard life-cycle model, where a fraction of the population is assumed to consume all their income owing to a liquidity constraint (Campbell and Mankiw, 1988). In this framework, financial liberalization could have an effect not fully anticipated by the McKinnon–Shaw theory. Specifically, the credit expansion allowed by the liberalization would lift the liquidity

constraint and, perhaps, induce an expansion in consumption and hence a fall in savings.

The hypothesis of changes in the sensitivity of consumption (and savings) to income changes is tested by interacting the explanatory variable with dummy variables reflecting three relevant periods (1955–75, 1976–81 and 1982–94). The results present some econometric difficulties[6] and relate to changes and not levels, so they do not allow us to be conclusive about the impact of the reforms on the rate of private savings. After 1975, changes in consumption (and savings) were affected by changes in current income (that is, there is a significant 'liquidity constraint effect'). However, the parameter reflecting the liquidity constraint proportion of population is shown to have decreased with credit expansion from 1975 to 1994. But the results show an intriguing pattern, implying the absence of a liquidity constraint in the period before the financial reforms. Interpreting these resultes deserves further research.

Financial Deepening and the Quality of Investment

The expected effect of financial liberalization on the quality of investment is positive, because at higher real interest rates the relatively low-yielding projects cease to be lucrative. Additionally, efficiency gains are predicted to result from the extension of banking activities and its impact on pooling, spreading and trading of risk, information-gathering and distribution, screening of investment opportunities, etc. Both the investment level and its efficiency determine the long-run rate of economic growth. The McKinnon–Shaw view would predict a significant effect of liberalized interest rates on the rate of growth, in both the short and long runs.

There is no consensus on the best method to assess these effects. A recent approach (King and Levine, 1992, 1993) relies on standard growth accounting methods to assess the extent to which the financial reforms impact on the rate of growth of the economy. Starting from a very general production function, the growth rate of potential output is decomposed into an employment component, a capital stock component and a production function shift component. The empirical implementation consists in regressing the latter on the interest rates and other variables reflecting financial depth, in conjunction with other policy variables and measures of changes in the stock of human capital.

Our approach consists in directly evaluating the effects of financial liberalization on productive efficiency by estimating the impact on the coefficients of a Cobb–Douglas aggregate production function of changes

of credit to the private sector as a fraction of GDP using annual observations for the period 1955–94. All the details of the econometric analysis of this section can be found in Noya *et al.* (1996b).[7]

We find only one significant cointegration relationship between the variables, when the traditional Cobb–Douglas labour and capital coefficients are dependent on the credit over GDP ratio:

$$\log GDP_t = (0.123 + 1.212CRE_t) \log K_t + (0.793 - 0.958CRE_t) \log L_t + A_t,$$

where K_t is machinery and equipment stock, L_t is hours worked, CRE_t is the ratio of credit to *GDP* and A_t is a term capturing the transitory dynamics in the model. In other words, credit expansion did not affect factor productivity neutrally.

This result does not imply that financial deepening explains higher observed per capita output growth after financial liberalization. The net impact of credit in per capita output growth is related to changes in both labour and capital, and can be positive or negative, depending on relative changes in both inputs. For instance, the years 1974–79 show GDP per capita growth, with increases in capital stock, but even higher growth in labour input. But strikingly, as capital/labour ratio declines, the contribution of financial deepening to output growth in this period was negative.

Effects on the Investment Rate

According to proponents of financial liberalization, investment would be affected via two main channels. The first is the increase in credit availability that would follow the freeing of interest rates. The second is that a rise in interest rates from the repressed to market equilibrium levels will ease the need of the firms to accumulate money to finance investment (McKinnon, 1973).

We analysed the determinants of aggregate investment trying to test whether firms have been subject to binding credit constraints before and after financial liberalization, based in the models of investment determination in different disequilibria regimes.[8] An aggregate investment function can be derived by considering representative firms that maximize their net market value, subject to technology and product demand. Credit shortages imply an additional constraint, that is, net investment must not exceed available funds.

The ratio of machinery and equipment investment over capital stock, I_t/K_t, is the dependent variable determined by Tobin's average q (proxied

by an index of the market value of shares deflated by industrial equipment prices), capturing the changes in the expectations of the return on future investment; the difference between marginal and average q, measured by the output capital ratio and the output – capital price relation, which can be interpreted as capturing the accelerator effect; and the availability of loanable funds, defined as the change in total deposits adjusted by legal reserve requirements, F_t.

Our econometric analysis is again based on Johansen (1988), and the model is estimated with annual series for the period 1959–94. The results do not allow us to reject the existence of only one cointegration relationship among the variables. Further exclusion tests determine that the accelerator variable can be excluded from the cointegrating relation. Exogeneity tests performed on the variables in the model suggest that the model can be interpreted as an investment function. The long-run equilibrium relationship is characterized by

$$(I/K)_t = 0.067 + 0.07q_t + 0.155F_t + A_t$$

Beyond the statistical significance, it is interesting to decompose the contributions of each of the determinants of the investment rate. This is done only with respect to the long-run relationship, excluding a constant (Figure 6.5). These results suggest that investment in Uruguay after 1959 is 'explained' partly by the availability of loanable funds. Thus, to the extent that fluctuations in this variable can be attributed to the financial reforms, the liberalization would have had the expected effect on the level of investment.

Though investment closely follows the evolution of Tobin's q, the available funds variable shows a non-negligible explanatory power. There seem to be two different situations, before and after the financial reforms. In the period before the reforms, the contribution of Tobin's q is rather flat, probably reflecting the poor prospects for investment. It would seem as if, in those years, changes in the investment rate were linked more closely to the variation in available funds, which is consistent with the idea of a rationed credit market. On the contrary, in the years after the reforms the pattern of the investment cycle looks closely determined by the Tobin's q. There are theoretical reasons to think that the parameter of the availability of funds might not be constant through time, a higher one corresponding to financial repression and a possibly smaller value after liberalization. However, it was not possible to test such a hypothesis, given the size of the available sample.

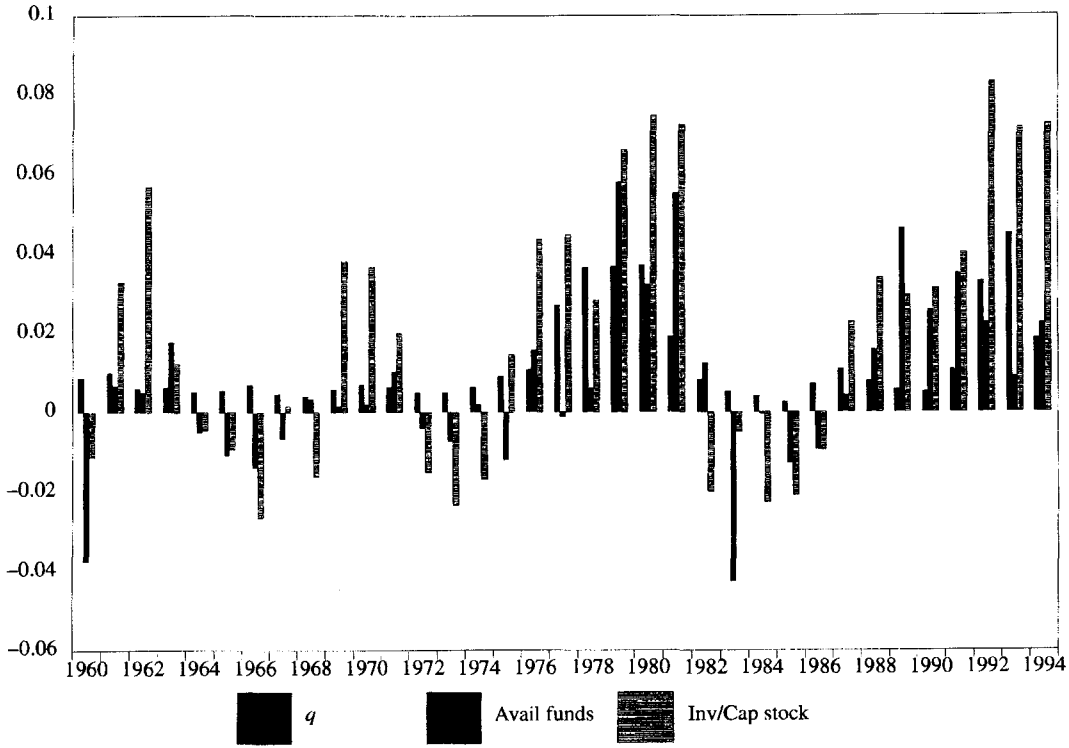

Figure 6.5 Uruguay: long-run determinants – investment rate; estimated contributions (minus constant)

6.5 MACROECONOMIC POLICY AND MONETARY FACTORS

In this section, we make a brief summary of the main macroeconomic policy orientations along the two decades of the Uruguayan financial liberalization experience. We then consider a set of analytical issues on the structural consequences that financial liberalization and an environment of openness brought to the conduct of monetary policy.

Basic Features of Macroeconomic Policies after Financial Liberalization

After financial liberalization, Uruguay experienced many kinds of macroeconomic policy. In Table 6.4 we summarize their main features.

The main concerns of macroeconomic policies varied between price stabilization and external equilibrium. The latter was particularly significant during the implementation of financial liberalization as well as in the external debt crisis of 1982–5. In the remaining periods, anti-inflationary objectives were pursued. During 1978–82 and after 1991, gradualist stabilization programmes, based on the exchange rate as an anchor, were implemented.

Policy-makers perceived as early as 1977 that old-style stabilization, which is based on monetary control, had difficulties. In the each 1970, the fixed exchange rate regime with a real exchange rate target forced the monetization of capital inflows, leading to the loss of control of monetary aggregates. Neither management of reserve requirements nor open market operation was a useful instrument. As higher reserve requirements implied higher loan interest rates, their usage ceased to be convenient. Open market operations were used to sterilize capital inflows in 1976–7, but those attempts altered the yield differentials between peso- and dollar-denominated assets, inducing further capital inflows. When emphasis was progressively shifted to price stabilization, this loss of autonomy of monetary policy was one of the explicit reasons stated for the adoption of a programme based in a nominal exchange rate anchor after October 1978.

Though the period 1983–4 was marked by external equilibrium and fiscal adjustment rather than price stabilization objectives, a monetary anchor was adopted again when the pre-announced exchange rate policy was abandoned in 1982 and the currency was devaluated. It was soon evident that pure flotation implied excessive volatility. Compulsory reserve requirements were restored, but such measures had only transitory effects. Policy-makers attempted to control monetary aggregates by issuing monetary regulation bills, and by the sterilization of the increasing

BROU's deposits. This policy continued by discretionary management of the mandatory reserves of the BROU, as well as by establishing a target for the BROU's nominal credit to the private sector in the late 1980s.

By 1990 a new stabilization programme, based on exchange rate fixation, was launched and the innovation was the setting of targets for the foreign-currency-denominated credit than the BROU granted to the private sector. This stabilization programme was modified in mid-1991 to more gradual targets, explicitly setting the exchange rate as a nominal anchor and again abandoning the control of monetary aggregates. A band for exchange rate flotation was introduced, and its bounds evolved at a monthly rate of 2.5 per cent, then reduced to 2 per cent in October 1992. Though there was no formal commitment to such devaluation pace, in practice, private agents assumed that it would be the future devaluation and adjusted their expectations accordingly. The exchange rate was always near the lower limit of the band.

The Mexican crisis at the end of 1994 did not impact on Uruguay through capital outflows as it did on many Latin American countries (such an impact was known as the 'tequila effect'), but it did indirectly, through the current account. Given Uruguay's large share of trade with Argentina and Brazil, the tequila effect was channeled by a fall in foreign demand. Not only was there no capital outflow, but there were even larger inflows, basically to the offshore segment of the banking market (with no effects on the domestic credit market).

This different reaction is explained by the different nature of the previous capital inflows in the 1990s. Though there are no systematic statistics, the limited data available show that there was neither large-scale direct nor portfolio investment flows. The stock market did not experience a boom similar to that of the so-called 'emerging markets'. At the same time, the relatively high creditworthiness of the Uruguayan government, which never failed to comply with its foreign commitments – even in the most difficult moments of the 1980s – must be borne in mind.

Some Analytical Issues

The Uruguayan experience of macroeconomic policy in a financial liberalization context allows us to draw some significant lessons related to monetary policy autonomy, the effects of dollarization on such autonomy and the sustainability of exchange-rate-based stabilization plans.

Liberalization and financial openness tightly integrated the domestic financial markets to the international markets, in such a manner that the ability to conduct autonomous monetary policy was reduced.

Table 6.4 Uruguay: main macroeconomic policy orientations after financial liberalization

Period	*Global orientation*	*Macroeconomic policy*				*External environment*	
		Monetary	*Exchange rate*	*Fiscal*	*Incomes and prices*	*Trade*	*Capital*
Oct. 1974–Sept. 1978	Initial objective: external equilibrium. Gradual movement towards price stabilization	Active control, with reserve requirements and open market operations	Active crawling peg (constant real exchange rate target)	Expansive expenditures (investment and subsidies) and higher taxes	Extensive and gradual price deregulation. Nominal wage control, with declining real wage	Sharp decrease in terms of trade in the previous months	Capital inflows (repatriation) mainly to public sector debt
Oct. 1978–Nov. 1982	Exchange rate based stabilization program (gradual)	Passive. Expansive deregulation of reserve requirements at the beginning	Preannouncement of devaluation lower than past inflation ('tablita')	Low fiscal deficit from the beginning (1% of GDP) till 1981. Expansive expenses in 1982, mainly in public banks	Lasting major price deregulation made as a shock at the beginning. Nominal wage deregulation but with minimum periodical compulsory adjustment (lower than past inflation)	High external (regional) demand till 1981, followed by a strong reversal	Capital inflows (repatration and non-residents) till 1981, directed to private sector. Reversal in 1982; high capital flight; high international interest rate (1981) and credit constraint (Mexican crisis)
Dec. 1982–Feb. 1985	Objective: balance of payments adjustment	Active control, with reserve requirements	Floating, purely or with some intervention	Severe fiscal adjustment, through expenditures reduction	None		External credit constraint (Latin American debt crisis)
March 1985–March 1990	Mixed objectives of external equilibrium and domestic recovery	Active. Issuing of regulatory bills and targeting of public banks credit	Accommodating crawling peg (constant real exchange rate target)	Discretional component was expansive	Sectorial wage bargaining with global guidelines resulted in *de facto* indexation to past CPI	Real external favourable shocks in 1985/86: higher external (regional) demand	External credit constraint but some repatriation. Lower international interest rates

Table 6.4 *Continued*

Period	*Global orientation*	*Macroeconomic policy*				*External environment*	
		Monetary	*Exchange rate*	*Fiscal*	*Incomes and prices*	*Trade*	*Capital*
April 1990–	Exchange rate based stabilization program (gradual)	Passive since 1991	Floating within a band since mid-1991. Exchange rate almost always equals lower limit	Severe fiscal adjustment through tax increases. Expenditures grew	Deindexation through suppression of sectorial wage bargaining (since 1991)	Strong external (regional) demand: terms of trade favourable shock	Capital inflows (repatriation)

Additionally, dollarization of financial assets reduced still more the monetary base demand, and with it the possibilities of practising sterilization policies. The clearest evidence is provided by the very slight margin between rates of return of domestic dollar-denominated assets (both bank deposits and public debt instruments) and international interest rates (as the Eurodollar market rate). This measure of country risk (Figure 6.6) has at times even been negative after 1985.

This integration with the international currency market was questioned in the debt crisis period, basically between 1982 and 1984. But then, both demonetization and the widening of the public deficit made active monetary policy even more difficult.

The loss of autonomy of monetary policy is reflected in the fact that only for a very brief period before 1978 was there an active monetary policy in its strictiest sense, attempting to control monetary aggregates to attain inflation targets. When the priority is stabilization, monetary policy has been passive and the influence on the price level is pursued through a fixed exchange rate mechanism.

Another sign of this is that, except during the most dramatic moments of the debt crisis between 1982 and 1984, the monetary authority exceeded its international reserves targets under the stabilization plans as well as in the rest of the period. The origin of this success was always an unexpected private capital inflow.

As to the effects of dollarization on demand for monetary aggregates, all research findings show a persistency in the degree of dollarization beyond the explanation given by interest rate differentials. Evidence of this is the fact that the interest rate differential between peso and dollar assets is a stationary process, while the degree of dollarization is non-stationary. This can be seen on Figures 6.7 and 6.8.

Dollarization limits the use of instruments to control domestic credit. An attempt to sterilize an increase in international reserves by raising mandatory reserve requirements in national currency will stimulate intermediation in dollars. If we assume loan rates and intermediation margins as given then higher reserve requirements in domestic currency will imply less return on domestic currency deposits. If, on the other hand, we assume equal yields in both types of deposits and fixed intermediation margins then higher mandatory reserves in national currency will determine less demand of domestic currency credit. Either way, an increase in reserve requirements in domestic currency will lead to increased dollarization, that is, substitution of domestic currency by foreign ones, reducing the demand for monetary base. The alternative would be to compensate the banks for the additional cost of reserves, but then the consequences

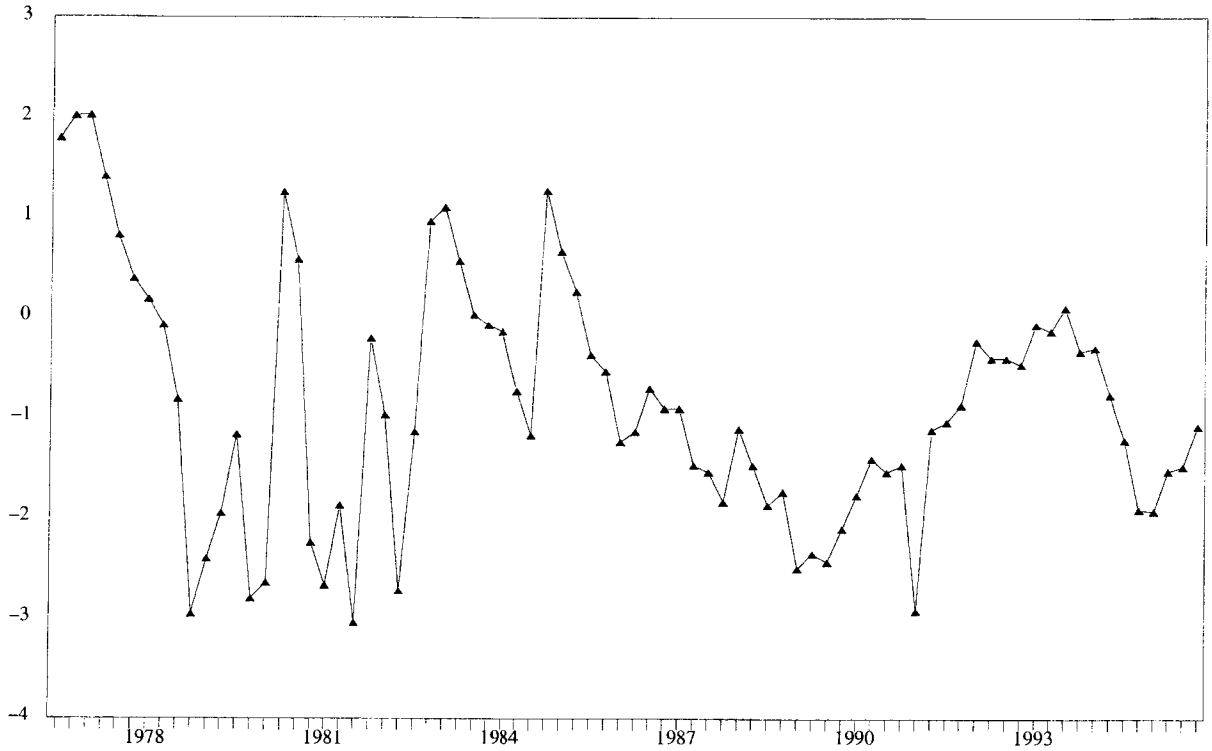

Figure 6.6 Uruguay: spread between domestic and foreign assets – USD domestic deposits (Eurodollar)

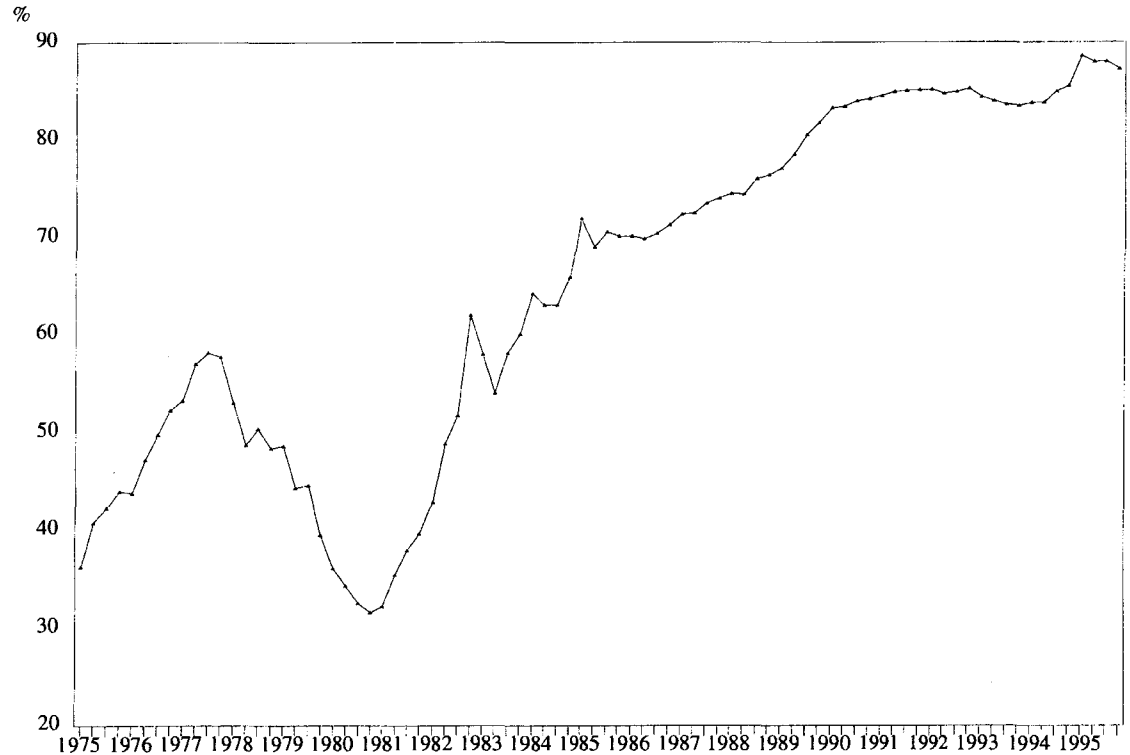

Figure 6.7 Uruguay: degree of dollarization – private sector deposits and public bonds

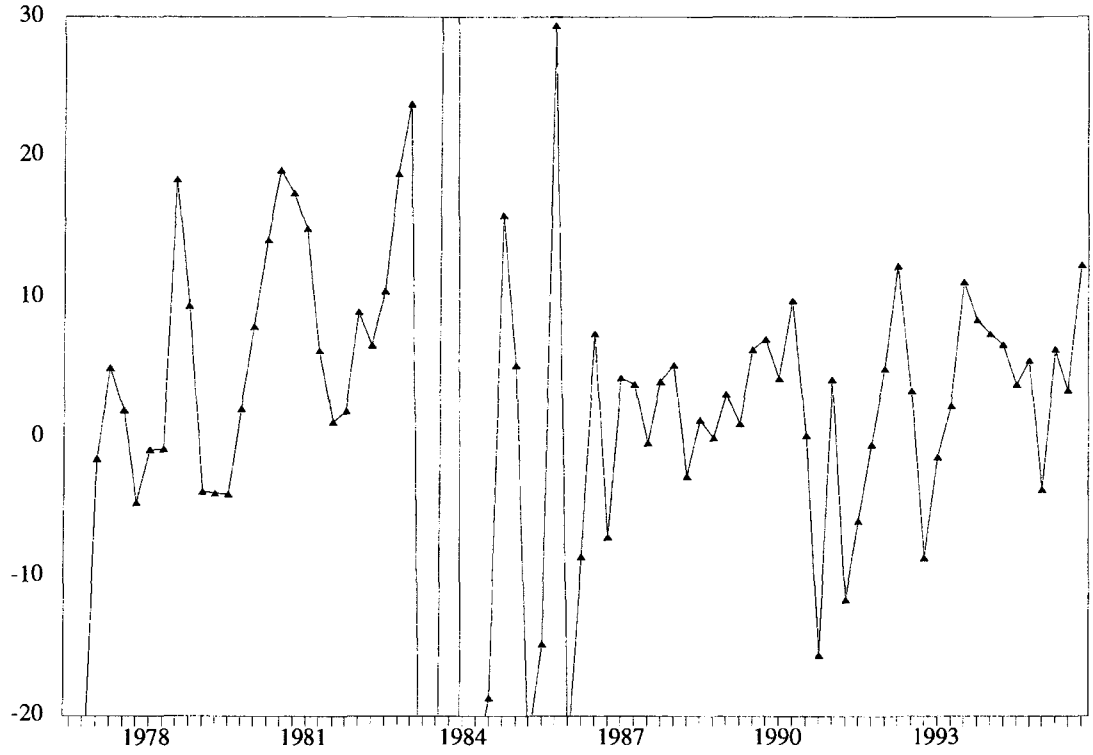

Figure 6.8 Uruguay: premium over national currency deposits (annual rate with expected devaluation)

would start to affect the fiscal situation, which would be reflected in the flow of interest payments in the central bank's balance sheet, just as in the case of open market purchases.

Both exchange-rate-based stabilization attempts in Uruguay followed a similar evolution, along the pattern already characterized in the literature (Kiguel and Liviatan, 1992; Végh, 1992). Briefly, this kind of stabilization plan generates an initial expansion, led by domestic absorption, together with capital inflows and real currency appreciation. Increasing dependency on capital inflows is the counterpart to the fall in domestic savings originated in a fall in private savings (since the fiscal deficit is generally reduced as the activity level grows). Then, a contractive phase follows the expansion, in which fiscal deficit rises and the economy becomes highly vulnerable to capital flow reversals.

From an economic policy view, as long as dependency from foreign savings seems to be the weakest point of this strategy, the fall in private savings must be avoided. If the initial private consumption expansion is, however, associated with increases in credit to the private sector, as the results by Noya *et al.* (1996) seem to show, then a conflict arises, at least in the short-run, between financial deepening and sustainability of the stabilization program. Control of domestic-currency-denominated monetary aggregates, beyond the issue of feasibility, would not be enough to avoid such initial expansion.

6.6 SUMMARY AND CONCLUSIONS

The financial liberalization process of the mid-1970s had important effects on the performance of the Uruguayan economy. Some of those effects coincide with the original predictions of the McKinnon–Shaw approach, but there are also others probably more important that were not foreseen in such literature. Within those unexpected effects are those related to dollarization and its consequences on the financial system fragility.

Particularly, financial liberalization seems to have had positive effects on capital investment efficiency. But the final effect on economic growth depends on the evolution of the capital/labour ratio. Because of this, the final contribution does not seem to be relevant to explain the relatively higher GDP per capita growth of the 1970s and 1990s, in contrast with the stagnant 1960s. Also, the reforms reduced to some extent, though did not eliminate, credit rationing to firms. This fact allowed firms to attain a higher investment rate and hence permitted the economy to reach a higher pace of economic growth. Even though the private investment cycle in the

period that followed financial liberalization is explained basically by the entrepreneur's profitability expectations, the bank credit expansion plays a positive role, and is important in explaining investment at some particular stages.

Both effects operate via the recovery of the degree of formal financial intermediation, and are relevant when compared in a long-run perspective to the highly distorted conditions of the period of financial repression. Financial deepening was not a result of a major change in savings. The main effect of the deregulation measures was, instead, a reallocation of the financial portfolio of private agents from the informal curb market and from assets accumulated abroad by capital flight toward the domestic financial system.

Given that deregulation was implemented in a context of a balance of payments crisis, the authorities had strong incentives to legally allow and even promote financial intermediation in foreign currency. For that reason the recovery of financial intermediation proceeded basically in dollar-denominated assets. However, the degree of dollarization of the household's asset portfolios was not a consequence of financial liberalization itself, but rather one of the phase of financial repression phase. This currency structure of financial assets had already been built up in the most acute financial repression years, basically between 1964 and 1973.

The fact that the reconstitution of financial intermediation proceeded by dollarization led to a higher financial fragility that had overwhelming negative consequences when the economy faced adverse external conditions. Dollarization became a factor that magnified the effects of unexpected adverse external shocks and macroeconomic policy reversals. As the absorption of such shocks required unpredictable adjustments in the exchange rate, it led to substantial capital losses on the part of firms. Those were later transferred to banks, leading them into insolvency. In turn, the capital losses of the financial system were absorbed by the public sector and constituted a serious fiscal problem.

Therefore, one of the lessons to be drawn from the Uruguayan case is related to the options available to economic policy to recover the financial intermediation levels. If there is high inflation at the starting point and liberalization precedes stabilization then the recovery of intermediation is more feasible when based in an asset free of inflation risk, that is, an indexed asset. If the starting point is such that assets held by the households are already dollarized and if additionally there is a foreign exchange shortage then it is evident that strong incentives arise for economic policy to accept and even promote the making of the recovery in financial intermediation in foreign currency.

However, from a normative view the optimal financial asset menu must, in the long run, minimize the systemic risk or financial fragility. In the Uruguayan case, indexation to the exchange rate of the overwhelming majority of financial assets has made the economy more prone to critical situations in the face of negative external shocks. Diversifying the indexes seems to be the natural economic policy recommendation. A sound recommendation would be the use of indexes inversely correlated to the exchange rate movements, the nominal wage being the obvious candidate.[9]

In case dollarization becomes inevitable, economic policy must clearly consider the increased systemic risk that it brings about. The only agent that may counteract such a systemic risk to a certain degree is the public sector, which hence should be auto-insured. That would imply increases in public savings destined to build up international reserves, which seems unlikely in contexts such as those in which liberalization reforms proceeds.

The various negative external shocks or inconsistencies in policies in subsequent years may have induced further portfolio substitutions towards dollar financial assets. When such adverse conditions were reversed, they did not seem to have consequences on such substitutions, and private portfolios did not return to domestic-currency-denominated assets. Private agents seem to have a lasting memory on past events, which led them to an apparently irreversible portfolio substitution. The microeconomic rationale of such behaviour is a basic issue for future research.

From a macroeconomic policy point of view, the structure of financial relations emerging after financial liberalization and openness seriously limited the possibility of making an active monetary policy. All stabilization attempts since then were based on exchange rate fixation. The monetary programme became part of fiscal policy, and was basically oriented to coordinate the financial needs of the public sector with the international reserve targets. The ability to sterilize capital inflows was limited, and the available instruments, both mandatory reserves and open market operations, had very reduced effectiveness. Given high dollarization of the economy, it seems difficult to think that any kind of control of capital movements may give additional scope to monetary policy.

On the other hand, the creation of a deep domestic market for dollar-denominated public debt, which was parallel to financial liberalization, gave larger flexibility to fiscal policy, allowing the smoothing of the the impact of the crisis of the 1980s. Such a market, for instance, allowed the maintenance of an average deficit of 5 per cent of GDP throughout the decade, without risks of hyperinflation in spite of the reduced money

demand, during a period of strong constraints in international credit, which was in sharp contrast to other Latin American experiences.

Regarding central bank regulation, financial liberalization was accompanied by the relaxation of prudential norms. This fact undoubtedly had a role in the development of the crisis in the 1980s, though more stringent supervision would hardly have avoided it.

Another lesson arising from the Uruguayan experience is that financial crises in a context of high dollarization make nationally owned banks more vulnerable, except those backed by the government. The authorities' reaction since then has been to restrict those institutions from entry, in a policy aimed at preventing future crises. However, this seems to have as a counterpart the higher segmentation of the credit market and high intermediation margins in some of the segments.

Notes

1. We are graceful to Erol Balkan, José Fanelli, Silvia Laens and Guillermo Rozenwurcel for helpful comments on previous versions of this chapter, and for the research assistance given by Fernando Borraz and Luis Sténeri.
2. The stock market lacks relevance in private firms, funding. Private equity issues amounted to only 0.1 per cent of GDP in 1994. Transactions in the secondary market on private equity represent less than 0.3 per cent of GDP since 1960. Only 20 firms quote their shares in the Stock Market, 4 of them concentrating 80 per cent of the operations.
3. New banking houses were allowed by reinterpreting a 1965 ban on new entrants, excluding non-resident deposits from the legal definition of 'national savings'. There was a *de facto* government in office, so the lack of amendments to the Bank Law could be interpreted as a sign of weak political support to the international financial centre project.
4. Banking regulation made the functions of financial cooperatives increasingly like those of banks, the differences between them being small at the beginning of the 1990s.
5. Spreads are expressed as $(1 + i_c)/(1 + i_d) - 1$, where i_c and i_d are the interest rates on credit and deposits. They should cover operating costs, the financial cost of reserve requirement immobilization, default risks and bank profits.
6. The different order of integration of the involved series makes it difficult to interpret the interest rate coefficient. while variations in consumption and income are $I(0)$, the interest rate enters the equation in levels and is $I(1)$.
7. Econometrically, the estimation is based on the methodology proposed by Johansen (1988), which allows the determination of the number of long-run (cointegration) relations among a set of integrated ($I(1)$) variables.
8. We follow the approach of investment functions of Artus and Muet (1990), adapted and surveyed for developing countries by Rama (1990).
9. Evidence that a long-run asset with such characteristics may be accepted by the public and complete with dollar-denominated assets is given by UR bonds (indexed to nominal wage), issued by the BHU since 1968 to finance

housing credit. They amounted to 3.7 per cent of GDP by 1979, losing share recently for supply reasons. The recent reform in the social security system provides the government with the possibility of issuing wage-denominated bonds again.

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Part III
Thematic Issues

7 Micro- and Macro-Level Financial Reform in Canada

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7.1 INTRODUCTION

Over the past fifteen or so years, financial liberalization has become increasingly popular around the world. Among industrial countries, we have witnessed the elimination of exchange controls in Europe, interest rate liberalization in Japan and the USA and major financial sector reforms virtually everywhere, most notably London's 'Big Bang' in 1986. In the USA, inter-state banking has been liberalized, while Glass–Steagall restrictions separating banking and securities business have been significantly eroded; this latter type of development is occurring in Japan as well.

While they are at an earlier stage than industrial countries, developing countries are also liberalizing exchange markets and introducing financial sector reforms. The number of countries maintaining multiple exchange rate regimes continues to decline, while a growing number of countries have moved or are moving towards full capital account convertibility (see Quirk *et al.*, 1995). On the domestic front, countries have concurrently liberalized interest rates and introduced financial sector reforms, often in the context of macroeconomic and structural programmes endorsed by the IMF and the World Bank.

These developments have been motivated by many factors, including changing macroeconomic conditions, financial innovation and increased competition among suppliers of financial services. Behind these factors also lies a general acceptance of the market-oriented paradigm for economic development and growth. By allowing market forces to set prices, including interest rates, economic decision-making should be enhanced which would lead to efficiency gains. Financial sector reform is viewed as a way to provide consumers of financial services with greater choice and access to financial instruments, make financial intermediation more efficient and possibly increase domestic savings and investment.

At the macro level, liberalization can have a profound impact on capital flows, exchange rates, financial systems and, as a consequence, on

monetary policy. Not only must central banks learn to cope with market forces that do not always act in the fashion desired by the authorities, but liberalization often means learning new ways of doing things. For example, the elimination of interest rate and credit controls will require the central bank to shift to indirect means of controlling monetary growth.

At the micro level, financial reforms such as changes in the powers of institutions to promote greater competition, are also important to a central bank. As lender of last resort and, in many countries, regulator and supervisor of financial institutions, a central bank has a very direct interest in monitoring developments that can affect more broadly the health of financial institutions and the financial system. A sound financial system is also important for the successful conduct of monetary policy, a central bank's principal responsibility. A weak financial system, for example, might inhibit a central bank from raising interest rates sufficiently to combat inflationary pressures.

While there has been a general acceptance of the desirability of financial liberalization at both levels, its achievement has often been difficult and sometimes costly. The dismantling of capital controls has, for example, contributed to increased capital flows across national boundaries, which can complicate monetary policy and accentuate foreign exchange crises. The most recent examples include the collapse of the Exchange Rate Mechanism in Europe during 1992–3 and the Mexican peso crisis of 1994–5.

By the same token, the granting of broader powers to financial institutions can lead to excessive risk-taking, particularly if the prudential and regulatory environment is weak. For example, the granting of additional powers to savings and loan companies in the United States during the 1980s, combined with regulatory forbearance, exacerbated existing problems related to interest rate mismatching. A costly government bailout estimated at $180 billion over the 1980–92 period was required (Edey and Hviding, 1995). Finland, Norway and Sweden also experienced serious bank failures during the late 1980s and early 1990s leading to government take-overs of major banks and massive liquidity and capital support. Currently, Japan is experiencing financial fragility that was caused in part by excessive risk-taking during the late 1980s. Major banking crises have also occurred in developing countries following financial sector liberalization (for example, in Chile, during the early 1980s, and, more recently, in Venezuela, Brazil, Mexico and Argentina).

Such experiences provide food for thought. Clearly, if done inappropriately, financial liberalization can have very unpleasant side-effects, however desirable it might be in the long run. Moreover, there appears to be a link between banking crises and balance of payments crises. While

the causality is unclear, experience has shown that a banking crisis often precedes the latter. (Kaminsky and Reinhart,[3] 1996) Note, however, that authorities may have little choice on whether to reform or not. Even if a tightly controlled financial sector is desired, the evidence shows that controls are likely to be circumvented. It may therefore be preferable for authorities to be proactive and manage the reform process rather than wait and be caught unprepared. In this light, it is advisable to examine the experiences of other countries to be better able to avoid the various pitfalls, or at least to learn how to deal with the consequences of a liberalized environment.

Canada's experience may be of particular interest to developing countries for a number of reasons. First, the structure of the Canadian economy is similar in many respects to that of a developing country. For example, Canada has traditionally been a major net borrower in international capital markets, relying on foreign savings to finance a significant proportion of domestic spending. In 1995, Canada's gross external indebtedness (including direct investment) totalled 89 per cent of GDP, while Canadian net external indebtedness was 45 per cent of GDP. In addition, Canada, like many developing countries, has a relatively small, open economy, significantly influenced by movements in its terms of trade owing to swings in commodity prices.

Second, Canada has been, in many respects, a pioneer in financial reform, having eliminated foreign exchange and interest rate controls in 1951 and 1967, respectively. With Canadian markets closely integrated with US markets, the Bank of Canada has developed considerable expertise in conducting policy in a very open, globalized environment.

Third, over the past decade, partly in response to several failures of deposit-taking institutions, the federal authorities have examined very closely the structure of the Canadian financial system and have implemented reforms aimed at enhancing the soundness of the system, while improving efficiency. The issues examined have included such things as the structure and powers of financial groups, ownership, foreign competition, the powers of the supervisor and or regulator, reserve requirements, and the payments and settlements system. While we do not necessarily profess to have found the definitive solution to all of these issues, what we have done and the supporting rationale may nevertheless be of interest to policy-makers in other countries.

This chapter is divided into four sections. Section 7.2 focuses on macro-level liberalization and examines how Canada deals with the challenges posed by open capital markets and increasing globalization. Attention is paid to the exchange rate regime, the current account balance and the

conduct of monetary policy, including the tools used by the central bank. Section 7.3 examines the micro-level reforms that have been introduced in Canada over the past decade. This review is followed by a short conclusion.

7.2 MACRO-LEVEL LIBERALIZATION

Capital Movements and the Exchange Rate

The easing of exchange restrictions around the world, trade liberalization, advances in telecommunications and portfolio diversification have all contributed to the globalization of financial markets and greater cross-border capital flows. As a rough measure of these developments, preliminary data for April 1995 indicate that the daily turnover in major foreign exchange markets has increased by roughly 45 per cent to $1230 billion over the past three years (Bank for International Settlements, 1995). This compares with global international reserves of only $807 billion as of the same date (International Monetary Fund, 1995).

Numbers such as these, combined with recent exchange rate crises in Europe and Mexico, have heightened concerns regarding the ability of a country to pursue independent policies in the face of global capital markets. Some observers have pointed to the 'dollarization' of some developing country economies as further evidence of this loss of monetary control.[1] However, dollarization is not a product of capital market liberalization, but rather is due to a loss of confidence by residents in the domestic currency owing to years of poor macroeconomic policies. In Canada, despite three-quarters of the population living within a hundred miles of the US border and unrestricted foreign exchange markets, where domestic banks offer foreign currency accounts to residents, foreign currency deposits of Canadian residents booked in Canada amounted to only C$27 billion in March 1996, equivalent to less than 6 per cent of broadly defined money supply (M3).

Nevertheless, concerns regarding the ability of countries to pursue completely independent monetary policies in an environment of global, integrated capital markets contain an element of truth. In particular, a country cannot pursue an independent monetary policy and at the same time maintain a fixed exchange rate. Moreover, while integrated capital markets and increased capital mobility have enhanced the ability of countries to borrow, they must maintain the confidence of the market. Persistent heavy borrowers, especially those with existing large debts, have therefore found

their freedom of action to be increasingly constrained. Deteriorating credit ratings and rising risk premia have put pressure on governments to make fiscal cuts and pursue consistent and sound macroeconomic policies. Although the market is a demanding taskmaster, most observers would still consider the discipline it exerts as being both necessary and appropriate. Indeed, the record has shown that exchange market pressures are typically well founded.

Notwithstanding this sanguine assessment of capital flows, problems can be identified. The market does not necessarily apply the brakes to country borrowing in an even and consistent fashion. Experience has shown that market access is not continuous. Countries on the cusp of investor acceptance can find their access to funds cut off abruptly in response to changing market conditions. At other times, ready and easy access to foreign financing may encourage excessive borrowing by both governments and private entities. Market sentiment can also be affected by extrapolative expectations. Although such speculative bubbles are hard to identify, especially *ex ante*, they pose challenges in the conduct of monetary policy.

How does Canada deal with potentially volatile capital flows? The short answer is a flexible exchange rate – a regime that Canada has pursued for much of the period since exchange controls were abolished in 1951, notwithstanding international pressures to conform to the Bretton Woods system of fixed exchange rates prior to 1973. This preference reflects in large measure two factors – the usefulness of a flexible exchange rate regime in facilitating adjustment to external shocks, and the continuing desire of Canadian monetary authorities for an independent monetary policy.[2]

Frequently over its history, Canada has been confronted with sizeable swings in its terms of trade and capital movements, which would have made it difficult if not impossible to sustain a fixed exchange rate. Indeed, the decision to float the exchange rate in 1951, and again in 1970 after an eight-year experiment with a fixed rate, was related to external factors. In both cases, faced with large balance of payments surpluses, the monetary authorities preferred a nominal appreciation of the exchange rate to keep domestic inflationary pressures under control over the maintenance of the fixed peg, which would risk an inflationary increase in the money supply.

This choice is as relevant today as it was in 1951. A fixed exchange rate requires monetary policy to be directed toward maintaining the external as opposed to its internal purchasing power. In other words, fixing the exchange rate implies the relinquishment of monetary independence. In the face of large capital inflows such as those experienced in Canada in the

past, and more recently by a number of emerging markets, a fixed exchange rate will inevitably lead to a monetary expansion and higher domestic inflation. When such capital inflows slow, or reverse themselves, the exchange rate peg will be tested. This will be reflected in a drawdown of foreign exchange reserves leading potentially to an exchange rate crisis (as occurred for example in Mexico in 1994–5).

While higher interest rates aimed at defending the exchange rate peg can forestall such a development, they may not be sufficient if the disequilibrium is large and the market views higher interest rates to be inappropriate given domestic economic conditions. The most notable example of this was the 500 per cent interest rate in Sweden during the Exchange Rate Mechanism crisis in 1992, as the Swedish authorities tried in vain to maintain the Swedish crown's peg to the European Currency Unit, notwithstanding the prevailing weak domestic economic situation. Such a policy was correctly perceived by market participants as not being credible.

These problems can be greatly mitigated by a flexible exchange rate regime. By allowing the nominal exchange rate to change in response to capital movements, the exchange rate can bear at least a portion of the weight of adjustment to shocks rather than being entirely borne by domestic variables. Moreover, the fact that the exchange rate will move may itself reduce or deter speculative flows; there are no 'one-way' bets to attract speculators.

Although a flexible exchange rate has much to recommend it, this is not to say that a fixed exchange rate is necessarily inappropriate in all circumstances. There is an extensive academic literature examining the relative merits of fixed versus flexible exchange rates for countries (Barth and Wong, 1994). Of particular importance is whether two or more countries form an optimum currency area (see Fenton and Murray, 1992). Factors to be taken into account include the openness of an economy, the types of shocks countries experience, the objectives of monetary authorities and the impact of the exchange rate on trade and economic efficiency. Also, second-best considerations might be important. For example, while it is doubtful whether Argentina forms an optimum currency area with the USA, one could plausibly argue that the currency board arrangement introduced in Argentina was a good second-best solution, given the lack of policy credibility in that country and its history of hyperinflation. Nevertheless, the use of the exchange rate as a nominal anchor, particularly by countries trying to acquire the credibility of the anchor country, is a high-risk strategy. Experience has shown that it can be very difficult politically to move to more flexible exchange rate arrangements in a timely fashion.

Flexible Exchange Rates and Monetary Policy

Without an external anchor for policy, one needs to have an internal anchor. Various types of these are possible, including targeting the growth of monetary aggregates, nominal income or, as in the case of Canada, inflation control targets. Such targets were introduced in Canada in early 1991 in conjunction with the government of the day. They were expressed in terms of the year-over-year rate of increase in the consumer price index and set to decline over time, reaching 2 per cent plus or minus 1 per cent. These targets were subsequently reaffirmed in December 1993 by the central bank and the current government, and extended out to the end of 1998. By 1998, a decision will have been made regarding what rate of change in the CPI is consistent with our ultimate target of achieving price stability.

Decisions regarding the conduct of monetary policy are taken in the context of these inflation control targets. In an open economy, such as Canada, monetary policy is transmitted through two channels – interest rates and the exchange rate. To operationalize this, the Bank of Canada has constructed a monetary conditions index (the MCI) for Canada consisting of changes in both real short-term interest rates and the real effective exchange rate (see Freedman, 1994). The relative weights were derived from averaging the results of a number of empirical studies that estimated the impact on Canadian aggregate demand of changes in the two variables. On this basis, a 1 : 3 ratio of effects was obtained, that is, a one percentage point change in real interest rates has approximately the same impact on aggregate demand as a three percentage point change in the real effective exchange rate.[3] For simplicity, and over short periods of time, the Bank typically focuses, however, on the nominal MCI, given the prevailing low level of inflation in Canada and its major trading partners.

Given the lags between monetary actions and their effect on aggregate demand, the Bank of Canada establishes a path for monetary conditions that is consistent with achieving the inflation control targets six to eight quarters in the future. In this context, the monetary authorities explicitly take into account the impact of exchange rate movements on the economy, something that might be ignored were the short-term interest rate alone to be used as the operational target for policy. For example, should the Canadian dollar rise as a result of capital inflows associated with a portfolio shift then interest rates can be lowered to maintain the same overall level of monetary conditions. Note, however, that while the overall monetary conditions may be unchanged on balance, different sectors of the economy will be affected differently. Interest-sensitive sectors will be

affected primarily by changes in interest rates, the export sector primarily by movements in the exchange rate.

While the central bank can affect the level of the MCI, through its influence over short-term interest rates, it has little or no control over the mix, which is determined by the market. In essence, there are an infinite number of interest rate and exchange rate combinations, which, on balance, will have similar effects on aggregate demand.

The conduct of monetary policy can at times be complicated by market dynamics related to the interaction of money and foreign exchange markets. For example, should market expectations be poorly anchored and the exchange rate come under downward pressure then market forces may simultaneously cause short-term interest rates to rise in such a fashion that monetary conditions on balance tighten. In such circumstances, should the monetary authorities add liquidity to the system in an effort to re-establish the desired easier monetary conditions then the market may react negatively, putting still further downward pressure on the currency.

As a consequence, tactical considerations may lead the Bank of Canada to take steps to calm the market even if in the short term this implies somewhat different monetary conditions than those desired. In short, even with a flexible exchange rate, the Bank does not have complete freedom of action. Indeed, it may have considerable difficulty in achieving a desired level of monetary conditions if the market has a markedly different view of the economic outlook and inflation trends (Zelmer, 1995). Nevertheless, once market conditions settle, the monetary authorities can take the necessary steps to return the MCI to the desired path.

To anchor the expectations of financial markets more soundly, the Bank's policy actions have become more transparent. In addition to the setting of inflation control targets on the road to achieving price stability, it now publishes a monetary policy report twice a year that is designed to improve the public's understanding of Canadian monetary policy. The Bank has also made efforts to explain its day-to-day operations in a clearer fashion.

What About the Current Account?

The recent Mexican experience has focused attention on international competitiveness and the current account. In an effort to maintain a 'sustainable' current account, policy-makers may be tempted to use monetary policy to target a specific real exchange rate. Two observations can be made about such a policy. First, given the absence of a nominal anchor, it will be destabilizing. For example, an exchange rate depreciation could lead to higher domestic inflation and, as a result, a stronger real exchange

rate. An easing of monetary policy aimed at restoring the original real exchange rate would raise domestic inflation, leading once again to a stronger real exchange rate.

Second, as a central bank has essentially only one tool at its disposal – changes in its balance sheet – it can only achieve one objective. Faced with this choice, the Bank of Canada focuses on something that it knows a central bank can achieve, that is, price stability.

However, it is nevertheless true that a sizeable current account deficit can be a sign of excessive domestic demand pressures. If a tightening of monetary conditions to slow demand results in a real appreciation of the exchange rate that is unacceptable to the authorities then other tools are required. Tighter fiscal policy, an approach used by several countries in recent years, may be a useful alternative, though one that may not be very timely (Schadler *et al.*, 1993).

Another potential tool that has received a lot of attention in recent months is short-term capital controls. Particular attention has been given to Chile, which introduced such controls in 1991 and managed to avoid the problem with surges in capital that were experienced by Mexico and other countries in Latin America. Although the Chilean authorities and certain authors argue that controls on short-term capital inflows were in part responsible for Chile's success,[4] other observers disagree, noting that the controls were easy to evade, an observation borne out the repeated need to broaden the controls (Resende, 1995). Moreover, recent empirical work has indicated that long-term flows, even direct investment, can be as volatile as short-term flows. Hence, an attempt to reduce the volatility of the capital account through the introduction of controls over short-term capital movements is unlikely to be effective (Claessens *et al.*, 1995).

It is also worth noting that Chile introduced during the early 1990s a number of changes to its exchange rate policy, which effectively provided the exchange rate greater nominal flexibility. This flexibility may have been more important in curbing speculative inflows than the controls on short-term capital. Measures taken included the adoption of a basket of currencies to determine its reference exchange rate, a widening of the fluctuation band and, on several occasions, upward revaluations of the band itself.

The Instruments of Monetary Policy in a Liberalized Environment

Much has been written on this subject. Most recently, the IMF published an extensive overview of research in the area and a number of developing country case studies (Alexander, 1995). Suffice to say that the Bank of Canada has found that the use of indirect instruments in the conduct of

monetary policy is strongly supported on the grounds that such a system provides effective monetary control and leads to efficient financial intermediation. Moreover, credit can be allocated by the market in an impersonal, non-discriminatory fashion.

Conversely, it is difficult to find examples where administrative controls have been useful in the long-run for monetary policy. In this regard, controls are typically designed to achieve non-monetary objectives such as the maintenance of low interest rates to promote investment or the provision of subsidies to certain sectors, notably the government. As with exchange controls, direct monetary controls are welfare-reducing. They also provide strong incentives to the public to try and circumvent them. This leads to disintermediation and, in the extreme, thriving informal markets.

In Canada, the central bank currently uses a number of techniques to adjust the liquidity of the financial system. These include the movement of government deposits between the central bank and commercial banks, repurchase agreements and open-market operations. It is noteworthy that mandatory reserve requirements are not used, having been phased out by mid-1994. The rationale for this development was threefold. First, banks were at a disadvantage *vis-à-vis* other financial institutions, since they were the only institutions required to hold mandatory, non-interest-bearing reserves at the central bank – in essence a hidden tax. On competitive equity grounds, the decision was made to eliminate reserve requirements rather than try to extend them to all financial institutions that took deposits (or offered products that closely resembled deposits) or to compensate banks for having to maintain mandatory deposits at the central bank.

Second, it was appreciated that reserve requirements were not required as some sort of prudential measure. Rather, Canadian authorities took the view that prudential concerns are better addressed through appropriate capital adequacy requirements, proper asset valuation and regulations regarding the type and concentration of assets that financial institutions can hold.

Third, and most important, mandatory reserve requirements were recognized as being unnecessary in the conduct of monetary policy. As large deposit-taking institutions ('direct clearers') are required to settle their obligations with each other on the books of the central bank, they must hold deposits (settlement balances) at the Bank of Canada to cover the daily clearing of cheques and other payments.[5] As these deposits do not earn interest, direct clearers have an incentive to minimize them. At the same time, overdrafts from the central bank incur interest charges. As a consequence, the major financial institutions aim to hold zero, or only very

small positive balances with the Bank of Canada. Given this environment, the central bank can influence short-term interest rates, thereby maintaining monetary control, through its ability to alter the banks' settlement balances by transferring government deposits between itself and the direct clearers or through open-market operations.[6]

7.3 MICRO-LEVEL LIBERALIZATION

Even though financial sector reform does not have a direct impact on monetary policy, central banks, even those not responsible for regulation and supervision of financial institutions, take a keen and understandable interest in financial liberalization. As noted previously, not only is the health of the financial system an important goal for public policy; systemic weakness of the financial system can compromise a central bank's ability to conduct monetary policy. Central banks are also typically lenders of last resort, and, as a consequence, must be confident that financial institutions are well managed and supervised.

One of the key motivating forces behind financial sector reform has been to increase competition in the financial sector, thereby enhancing investment through lower borrowing costs and fostering greater domestic savings through higher returns on deposits and a wider range of investment products. There may, however, be a trade-off between financial sector stability and market efficiency. A tightly controlled financial system may be, at least in the short run, more stable. However, this stability may come with a high pricetag in lost efficiency. Moreover, the stability could be illusory if a heavy regulatory burden gives rise to a large portion of financial activity being conducted in unregulated, unsupervised, informal markets, or if highly disruptive changes to the system occur in the longer run.

On the other hand, a competitive, market-based financial system will have failures, notwithstanding an effective regulatory and supervisory system. Indeed, the right of entry must also imply the right of exit. It is therefore important to ensure not that financial institutions cannot fail, but that they have the right incentives to avoid excessive risk-taking, and that failures, when they occur, do not destabilize the financial system. The authorities must also have the capacity and the willingness to act quickly. As can be seen in many countries, most vividly with respect to the savings and loan problem in the USA and most recently in Japan, regulatory forbearance not only delays the resolution of financial problems, but it can also often compound them.

Over the past decade, partly in response to the failures of two small chartered banks in the mid-1980s and subsequently other non-bank financial institutions, the federal authorities in Canada have examined closely all federal financial legislations.[7] In 1992, sweeping changes were made to the legislative framework for federal financial institutions covering the powers of financial institutions, ownership structure and prudential safeguards.[8] Considerable attention is now being paid to risk-proofing the payments and settlements system – an often overlooked but essential element of a financial system's infrastructure, and enhancing more generally the soundness of the Canadian financial system. (Government of Canada, 1995). While the Canadian system may still not be perfect, Canadian authorities believe that Canada has a financial system that is both competitive and safe.

Before examining the consensus that has emerged in Canada on financial sector reform over the past decade, it is important to note that the starting conditions in Canada were very different from those in many developing countries. For example, the macro-level reforms discussed in Section 7.2, such as capital account convertibility, market-set interest rates and a competitive financial industry, have long been features of the Canadian financial landscape. Canada also has a well-established legal structure, dealing with such things as property rights, contracts and bankruptcy and a solid supervisory structure – essential elements for a successful financial system. Canada has additionally maintained a relatively stable macroeconomic environment, something that experience from around the world has shown to be highly desirable in embarking upon financial sector reform (see World Bank, 1989).

As a consequence, Canada, unlike many developing countries, has not had to deal with many of the problems that can arise from the interaction of macro and micro liberalization. For example, a stabilization programme that is anchored by a fixed nominal exchange rate can lead to a real appreciation and an unsustainable consumption boom. Capital inflows made possible in part by the opening of the capital account, and which are typically intermediated by the banking system in developing countries, can further fuel this boom. In this regard, concern has been expressed about the possibility of excessive optimism emerging in a reforming developing country, leading to 'overborrowing' and ultimately a financial crisis (McKinnon and Pill, 1994). Greater intermediation, combined with banking-sector liberalization in an environment of explicit or implicit government guarantees, can lead to banks venturing into little-understood, high-risk types of lending (for example, property development). This is particularly a concern for institutions that prior to liberalization were pri-

marily in the business of lending to governments. Such institutions may have little knowledge about assessing credit risk.

Moreover, financial institutions in developing countries may also be encumbered with low-yielding or non-performing loans, the product of government-directed lending. Unless their balance sheets are put on a more solid footing through capital injections, or the bad debts offloaded (presumably to the government), then they will not face the right incentives. High risk, 'shoot-for-the-moon' strategies may result as these institutions attempt to restore their solvency. Such institutions would also be competitively handicapped, potentially making it more difficult politically to introduce greater competition, especially from potential foreign entrants. As a result, the benefits of financial liberalization may be slow to materialize.

At the same time, lenders may also face the wrong incentives. Capital inflows into developing countries may be partially a response to a 'chain of guarantees' provided by governments (Dooley, 1994). Such guarantees would include a commitment to a fixed or quasi-fixed exchange rate, implicit or explicit guarantees to domestic financial institutions and, conceivably, international 'guarantees' to provide financial support to countries that get into difficulties.

The following is a summary of the consensus in Canada on a range of issues associated with financial-sector liberalization.

Powers of Financial Institutions

Under the new Canadian federal legislative framework, financial institutions are permitted, either directly on their own books or indirectly through subsidiaries, to engage in a wide spectrum of financial activities. These include: deposit-taking, corporate lending, insurance (life and general accident), stockbrokerage and investment dealing, and fiduciary business. Suitable 'Chinese walls' are required between various types of business to minimize conflicts of interest. Some restrictions are imposed on small financial institutions with regard to the extent to which they can engage in corporate lending, which is viewed as being more risky than other activities.

One important missing item from this list of permissible activities is the power of financial institutions to own controlling positions in non-financial enterprises (that is, downstream commercial linkages), other than on a temporary basis through the realization of collateral. Thus, Canada subscribes to a narrow universal bank model as opposed to the broad

model practised in Germany. This reflects our concern about possible distortions to the credit allocation process arising from such linkages, and the appropriateness of deposit-taking financial institutions holding substantial amounts of equities given the nature of their liabilities.

By the same token, concerns have been expressed about upstream corporate linkages, which are viewed by some as being more problematic than downstream linkages, given the risk that the financial institution might be used as a funding tool by its corporate parent. Wide ownership is one method of controlling this risk. Strong rules on non-arm's-length transactions are another method, though one that would be dependent on such rules being enforced.

Ownership

Historically, there has been a preference in Canada for widely held financial institutions (that is, no single shareholder owning more than 10 per cent of the outstanding shares). As a result, all major banks are widely held, as are many major insurance companies by virtue of them being mutual companies and hence owned by their policyholders. In the past, this preference in part reflected concerns about the possibility of foreign ownership of the financial sector; the requirement of wide ownership deterred foreign take-over of Canadian financial institutions. More recently, and perhaps more importantly, this preference has reflected a view that such institutions are less prone to serious (that is, solvency-threatening) forms of non-arm's-length transactions. Experience both in Canada and abroad has shown that such loans, which lack independent third-party judgement, can pose a significant hazard to the health of financial institutions.

However, it is also recognized that a controlling shareholder can provide a useful direction to a financial institution; in contrast, wide ownership can contribute to complaisant management practices. Indeed, successful, closely held, deposit-taking institutions exist in Canada. Nevertheless, even if regulations are put in place to deter and limit self-dealing, concerns remain regarding this type of ownership, particularly when large institutions are involved – those whose failure may have systemic implications. Therefore, a compromise was reached. Canadian-owned banks must remain or become widely held, while non-bank financial institutions must have at least 35 per cent of their shares widely held when they attain a given size set in terms of capital. A widely held position of this magnitude was viewed as being sufficiently large to attract independent third-party scrutiny by market analysts.

It is interesting to note that Canada does not permit foreign deposit-taking institutions to operate in Canada via branches; only subsidiaries are permitted. While this provision has been criticized by some of Canada's trading partners, and may have to be modified in the light of the North American Free Trade Agreement, it has served Canada well. Because subsidiaries have their own capital base, Canadian depositors and the Canada Deposit Insurance Corporation (CDIC) are better protected than if the Canadian operations of the foreign entity took the form of a branch. In this regard, a foreign parent financial institution can fail without its Canadian operations being forced to close. Legally separate Canadian operations are also helpful in clearing and settlement systems, because, in the event of a failure, it would be clear which country's laws would apply, namely those of Canada. More legal certainty is also provided regarding collateral pledges and the netting of payments.

Self-Dealing and Conflicts of Interest

Mention has already been made regarding the problem of non-arm's-length transactions, often called self-dealing, and conflicts of interest. Given that Canada has closely held institutions, controls over transactions involving a financial institution and its controlling shareholders, directors, their relatives and their outside commercial interests were viewed as essential. Widely owned institutions are also subject to this regime, although the risks posed by such transactions were seen to be less serious for these institutions, given the nature of their ownership. In addition to regulations and supervisory oversight of non-arm's-length transactions, corporate governance has been enhanced. The new legislation requires that at least a third of a financial institution's board to be unaffiliated, directly or indirectly, to the financial institution. These directors are required to make up the majority of conduct review committees that must approve non-arm's-length transactions.

The control of non-arm's-length transactions and conflicts of interest may be more difficult in developing countries than in a relatively large industrial country such as Canada. First, developing countries, particularly small ones, may have a very small pool of qualified financial talent form which to draw. It may therefore be difficult to find 'unaffiliated' directors for financial institutions. Second, cultural practices may pose a problem in some countries. Impersonal lending practices that characterize a market-based financial system can conflict with 'accepted social norms that family and friends come first' (Tanzi, 1995).

Supervisory System, Market Discipline and Transparency

Strong prudential supervision is clearly important for the health of a financial system, especially systems undergoing liberalization, because liberalization usually implies exposing financial institutions to new, unfamiliar risks. Indeed, in the sequencing of financial reforms, the introduction of an adequate supervisory system is key if delays or, worse, financial crises are to be avoided (Sundararajan, 1995; Quirk and Evans, 1995). Such supervision has two elements – the formal supervisory system and market discipline.

While a formal supervisory and regulatory framework ought not to, eliminate failures, and indeed cannot, it should permit an orderly resolution of problems. After examining supervisory models used in other countries, the Canadian authorities favour a flexible approach that permits early intervention, and, if necessary, allows the supervisor to close a financial institution in financial difficulty, even though it still has positive capital and, hence, is not technically insolvent (Government of Canada, 1995). This latter power is valuable in ensuring that depositors and the deposit insurance fund are better protected from loss. It can also minimize the systemic consequences of a failure, as well as the problem of institutions being 'too big to fail'.[9]

This early intervention policy should be expressed in a legislated mandate for the supervisor. The value of this is twofold. First, it clarifies the intent of the authorities and what the supervisors will do or require a financial institution to do should it get into difficulty. Second, greater transparency will enhance the rule of law and makes the supervisory agency more accountable. It would also help to clarify that the failure of a financial institution does not imply a failure of the supervisory and regulatory system.

Reliance cannot, however, be placed solely on the formal supervisory system. Market discipline is an essential element of strong prudential oversight. The key to effective market discipline is timely and accurate information on the activities of financial institutions, both on their balance sheets and off. Greater financial transparency will contribute to more prudent behaviour by banks and help to nip any problem in the bud. For this to be possible, however, accounting standards must be high and assets valued appropriately. Of course, for market discipline to work, governments, cannot extend any explicit or implicit guarantees of financial institutions (that is, it must be possible for depositors and shareholders to lose money).

While the market can discipline financial institutions that take excessive risk, non-diversifiable systemic risks may exist that may be difficult

for markets to cope with. A major negative terms of trade shock could, for example, pose difficulties for a country's financial system. However, even in countries that routinely experience unstable macroeconomic conditions, financial institutions can adapt by maintaining conservative lending practices and larger capital bases. To the extent that policy is responsible for the unstable macroeconomic conditions, capital outflows will help discipline governments.

Capital Adequacy

While the Basle standards regarding adequate capital for financial institutions with an international presence provide a good foundation upon which to assess capital adequacy, they may not be sufficient. For example, the guidelines are currently meant to address only counter-party risk. While they will be broadened to cover market risk by 1997, there are other forms of risks that will still not be covered. For financial institutions taking advantage of broader powers following liberalization, more capital than otherwise may be required. Although broader powers may reduce overall risk, assuming the returns on the new activities are not positively correlated, the opportunity for excessive risk-taking in unfamiliar areas by management who may have little experience in making credit judgements argues for a stronger capital base, at least initially. Higher capital standards could, but not necessarily, lead to interest rates that were somewhat higher than they might otherwise be.

Deposit Insurance

Deposit insurance has been hotly debated in Canada. On the one hand, Canadian authorities are very aware of the moral hazards associated with deposit insurance. In particular, depositors, at least those below the insurance threshold of 60 000 C$, have no incentive to monitor the health of financial institutions. Concurrently, financial institutions that engage in relatively risky activities can borrow and fund such activities on the basis of the government guarantee. On the other hand, deposit insurance reduces the likelihood of runs on financial institutions, facilitates the entry of new deposit-takers and protects small, unsophisticated depositors from loss.

In recognition of these conflicting arguments, there has been considerable discussion regarding ways of improving the incentive structure of deposit insurance, while preserving its beneficial aspects. Coinsurance, a plan whereby depositors would share in any losses was considered

but in the end rejected. Instead, a risk-based deposit insurance system has been proposed, under which the deposit insurer would charge a deposit-taking institution a variable premium based upon a number of criteria, including the quality and diversification of assets, financial strength and the quality of management. This is expected to be implemented in 1997.

Payment and Settlement Systems

Payment and settlement systems have become a major topic of interest in international fora, especially the Bank for International Settlements and the G-10, in recent years. Part of the essential infrastructure of the financial system, such systems have often been overlooked, because most of the time they function behind the scenes without any apparent problem. However, problems can arise, and when they do they can pose a significant systemic threat to the financial system. This fact was made very apparent in the USA in 1985, when owing to a computer malfunction, the Bank of New York was unable one day to make payments due on its security operations. In order to avoid knock-on defaults of institutions that were expecting funds from the Bank of New York, the Federal Reserve made an unprecedented discount window advance of about $23 billion to the Bank of New York (Corrigan, 1986).

It is in this context that considerable work has been done in G-10 countries to develop effective and competitive payments and settlements systems that deal with systemic risk concerns. Two approaches are being pursued – a gross real-time payments system and 'Lamfalussy-compliant' netting arrangements, that is, arrangements that meet internationally recognized prudential standards for the design and operation of cross currency and multi-currency netting and settlement systems (Committee on Interbank Netting Schemes, 1990). Both approaches provide the same benefits, in particular certainty of settlement for participants and intro-day receiver finality to end users.

Most G-10 countries favour a gross, real-time payments system, whereby payments are cleared and settled one at a time. Such a system ensures intra-day finality and minimizes risk, because a payment cannot be made until sufficient funds are in the paying financial institution's account. However, to avoid gridlock at the beginning of the day, high-quality securities, typically government securities, are required to serve as collateral or be used in repo transactions.

Canada has opted for the second alternative, and intends to introduce by 1997 a Lamfalussy-compliant netting system for clearing and settling pay-

ments. Each transaction will be processed in real time and will be subject to risk control measures, that is to caps on bilateral and multilateral exposures, which will be set at the beginning of the day. Collateral will also be required to ensure that the system will settle in the event of the failure of the largest single participant in the system. The Bank of Canada will stand ready to provide if necessary additional guarantees to cover the very remote possibility of two or more large failures occurring the same day. Intra-day certainty of settlement for large payments will be assured through the large value transfer system (LVTS), which is currently being developed by Canadian financial institutions through the Canadian Payments Association in conjunction with the Bank of Canada.

Draft legislation has also been introduced into Parliament that would give the Bank of Canada a more formal and explicit role in the oversight of clearing and settlement systems, with the objective of controlling systemic risk. This would mean that private sector operations of those clearing and settlement systems that could potentially pose systemic risks (for example, systems for clearing and settling foreign exchange transactions or securities transactions) would be required to obtain the approval of the Bank of Canada regarding the arrangements in their systems to monitor and control risks (see Thiessen, 1995).

7.4 CONCLUSION

The transition from a closed, heavily regulated financial system to one that is open and market-based can be difficult. The removal of foreign exchange and interest rate controls will accelerate the integration of domestic and international financial markets. For those countries unfamiliar with the ebb and flow of market forces, this may feel like a loss of control. However, an independent monetary policy is possible if a country adopts a flexible exchange rate regime. This independence is, however, not absolute. A central bank's actions will be circumscribed by market forces. However, it can acquire manoeuring room by pursuing credible policies. Greater transparency of central bank policy objectives and actions is helpful in this regard.

Micro-level reforms, including most importantly a broadening of powers available to financial institutions, can be costly if not undertaken carefully. For countries attempting to undertake such reforms concurrently with a removal of barriers to capital movements, the introduction of a stabilization programme and a move to indirect monetary instruments, the challenges are that much greater. To the extent possible, thought should be

given to the sequencing of reforms. Evidence from around the world strongly suggests that a stable macroeconomic environment is very helpful when embarking upon financial liberalization. Other prerequisites include a suitable legal and accounting environment. Nevertheless, problems can be minimized if: (1) institutions have the right incentives to act prudently and competitively; (2) the supervisory system is effective; (3) institutions are strongly capitalized and (4) there is a strong dose of market discipline.

Notes

1. In dollarized economies, foreign currency, typically US dollars, is preferred by residents over domestic currency in transactions and as a store of value.
2. For a review of the case for a flexible Canadian dollar, see Laidler and Robson (1990) and Crow (1995).
3. In constructing MCIs for other countries, different weights are likely to be required, depending on how open their economies are. For example, a relatively closed economy would have a small weight for the exchange rate.
4. For example, see Ffrench-Davis, R. *et al.* (1995).
5. Direct clearers consist of major banks and large, non-bank deposit-taking institutions that maintain deposits at the central bank. Smaller financial institutions (indirect clearers) clear through one of the direct clearers.
6. For more information, see Thiessen, G.G., 'Uncertainty and the transmission of monetary policy in Canada,' the Hermes-Glendon Lecture, York University, March 30, 1995, Bank of Canada Review, Summer 1995. See also, Nöel, T., 'Bank of Canada Operations,' Remarks made to the Toronto Association for Business and Economics and the Treasury Management Association of Toronto, October 25, 1995.
7. Note that financial institutions in Canada come under both federal and provincial jurisdiction. All banks are incorporated at the federal level and, hence, are federally regulated and supervised. While most large non-bank deposit-taking institutions and insurance companies are also under federal jurisdiction, some such institutions are provincially incorporated and supervised. Dealers in securities are also provincially supervised.
8. For a review, see Daniel *et al.* (1993).
9. Risk-proofing major clearing and settlement systems can also reduce the problem of some institutions being considered as 'too big to fail'.
10. Committee on Interbank Netting Schemes (1990) *Report of the Committee on Interbank Netting Schemes of the Central Banks of the Group of Ten Countries* (Basle: Bank for International Settlements) (November).

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8 The Unforgiving 'Market' and the *Tequilazo*

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8.1 INTRODUCTION

Mexico's financial débâcle and its impact on other emerging markets (the '*Tequila* effect') has raised many fundamental questions. Mexico achieved fiscal balance in 1993, undertook several fundamental market-oriented reforms, signed a free trade agreement with a very large market (the NAFTA), became a member of the OECD, and was hailed by international institutions as a paramount example of successful reform. Yet the 1994 devaluation of 20 December brought the economy down like a house of cards. Output fell by more than 7 per cent in 1995, the current account deficit sharply swung from about 8 per cent of GDP in 1994 to zero and investors turned their noses away from high-yield Mexican public debt, even though the international community had pledged about $50 billion in a rescue package. In addition, Mexican problems quickly spread around the world's emerging markets, including those exhibiting long and enviable track records.

Argentina is even more puzzling than Mexico. After adopting the Convertibility Programme – which in March 1991 established, *by law*, a fixed exchange rate against the US dollar – the economy grew by more than 6 per cent annually. Fundamental reforms were undertaken that went far beyond those in Mexico, and fiscal imbalance was sharply cut. In contast to Mexico, Argentina did not devalue the peso and, instead, adopted a significant IMF-sponsored adjustment programme. Emergency finance was provided through the IMF and the *Bono Patriótico* (national bonds), although it amounted to only about a tenth of the Mexican rescue package. In spite of that, in 1995 output fell by 4.4 per cent and unemployment reached 18.5 per cent in May, an unprecedented level.[2]

This chapter discusses several issues linked to the above phenomena, and offers a tentative but coherent explanation. Section 8.2 discusses current account sustainability, an issue that has received renewed attention after the Mexican débâcle. Section 8.3 discusses the seminal paper by Krugman (1979), which laid the foundation for modern balance of pay-

ments crisis theory. It will be argued that although these approaches offer crucial insights into balance of payments problems, they represent highly incomplete rationalizations of recent events.

Section 8.4 brings to the analysis some key financial considerations and puts forward the conjecture that a Mexican-type crisis could partly be provoked by exogenous or external factors. Among other things, it is argued that financial market 'globalization' could lead investors to move their portfolios around on the basis of flimsy data, disregarding 'fundamentals'. Section 8.5 examines some links between balance of payments crises and output collapse. Two channels are identified: (1) price/wage stickiness and (2) supply-side effects associated with pro-cyclical fiscal adjustment. Section 8.6 recapitulates and brings up some general policy issues. Section 8.7 closes the chapter.

8.2 CURRENT ACCOUNT SUSTAINABILITY

Shortly after it became obvious that Mexico was about to crash, a number of financial analysts 'discovered' that Mexico had been running an *unsustainably* large current account deficit. Thus, the crisis was seen by those analysts as an inevitable 'correction' to keep Mexico within its budget constraint. In my view, this assessment is seriously incomplete, although, as is argued in Sections 8.5 and 8.6, current account deficits (especially when they are accompanied by an unusually appreciated currency) could be a sign of impending trouble.

The sustainability literature is based on the budget constraint equation. To illustrate, let us denote by b and CAD net international debt and current account deficit (both as a share of GDP), respectively. Then,

$$\dot{b} = CAD - \eta b \tag{8.1}$$

where η is the rate of growth of output (the overdot signifies the first difference). Sustainability analysis focuses on steady states. Thus, setting $\dot{b} = 0$ in equation (8.1), the steady-state – sustainable – current account deficit satisfies

$$CAD_{\infty} = \eta b_{\infty} \tag{8.2}$$

where the subscript ∞ denotes 'steady state.' This equation establishes a relationship between steady-state debt and current account deficit. If no

growth is possible, that is, $\eta = 0$, then the sustainable current account deficit is necessarily equal to zero. In contrast, with positive growth a sustainable current account deficit is possible.

This analysis is unable to give us a definite answer on CAD_∞ until we pin down b_∞. Recent experience shows that the capital market is reluctant to keep lending to developing countries that exhibit levels of indebtedness exceeding 80 per cent of GDP (see Williamson, 1993). Hence, this additional piece of information allows us to write the sustainability condition (8.2) as follows:

$$CAD \leq 0.8\eta \tag{8.3}$$

Thus, a country that can be expected to grow at 4 per cent per year cannot *sustainably* run a current account deficit exceeding 3.2 per cent. Since 4 per cent was, if anything, an upper bound for Mexico, this analysis would conclude that its 8 to 9 per cent current account deficits were grossly unsustainable.[3]

Notice that the current account deficit $CAD = rb - TS$, where TS denotes trade deficit (including non-financial transfers) as a share of GDP, and rb denotes debt service (r is the 'international' rate of interest). Therefore, by equation (8.2),

$$TS_\infty = (r - \eta)b_\infty \tag{8.4}$$

Thus, if again we set the growth rate $\eta = 4$ per cent and, in addition, we assume the international interest rate $r = 10$ per cent per annum, then, by (8.4), at steady state the economy must run a trade balance surplus of $0.06b_\infty$ as a share of GDP. The trade balance surplus increases with the steady state debt/GDP ratio b_∞. In particular, at the upper bound for b_∞ (80 per cent) the trade balance surplus would be 4.8 per cent of GDP.

Presumably, the reason for capital markets to be unwilling to extend credit to developing countries beyond 80 per cent of GDP is that it may become tempting for those countries to renege on their debt obligations. Temptation, in turn, is likely to be related to the sacrifice associated with servicing the debt. Gross sacrifice of servicing the debt can be measured by the associated trade balance surplus. The previous computation suggests that the capital market becomes nervous about a country's willingness to repay when debt service represents only about 5 per cent of GDP. Notice that the *net* sacrifice from servicing the debt could be much less once we take into account international penalties from debt delinquency.

Thus, one criticism of current account sustainability computations is that they are highly sensitive to the definition of sustainable debt/GDP ratios. Besides, the above example shows that the implied critical sacrifice levels are low when compared with other capital market transactions. For example, mortgages in the USA are easy for a household to get if total mortgage payments are less than 25 per cent of the household's income. Thus, if this ratio were also relevant for countries' debt then, using the above parameters, the critical steady state debt/GDP ratio would be 4.16 (calculated by $0.25/(r - \eta)$, where $r - \eta = 0.06$). Therefore, if we recall equation (8.2), a country growing at 4 per cent per year could run a sustainable current account deficit of more than 16 per cent of GDP! Of course, countries are not mere households, because they are protected by sovereignty clauses. However, prior to the crisis Mexico had given very clear signals that it wanted to belong to the First World and had signed treaties that would have made it very costly to engage in strategic repudiation of international debt (or any debt, for that matter).

Another even more fundamental criticism of standard current account sustainability analysis is that it is constrained to steady states. Why should these measures be of any relevance for a reforming economy like Mexico and Argentina? The budget constraint equation underlying the above steady-state analysis (but also applying to non-steady-state paths) is

$$b_0 - \int_0^{\infty} TS_t e^{-(r-\eta)} dt = 0 \tag{8.5}$$

where subscript t denotes calendar time, and present time is normalized to zero. Thus, budget equation (8.5) would allow very large trade deficits if they were expected to be eventually followed by equally large trade surpluses (discounted to the present). As a result, steady-state sustainability computations may have little to say about the economy's *solvency*, captured by equation (8.5), which is, or should be, the fundamental issue addressed by this literature.

However, it may still be the case that large current account deficits in the short run may quickly call for unsustainable future trade surpluses. The following example will address this issue. Suppose the country's net international indebtedness is 50 per cent of GDP. Consider the case in which the country runs a trade balance deficit that will result in increasing the debt/GDP ratio to 80 per cent in seven years. (The trade deficit as a proportion of GDP will be held constant over the first seven years.) Assuming, again, that the international interest rate is 10 per cent and output grows at 4 per cent per year, then one can show that the trade

deficit as a share of GDP during the first seven years will be about 1 per cent. Thus, because the initial debt/GDP ratio is 50 per cent, the debt service amounts to 5 per cent of GDP, implying that the current account deficit at the start will be about 6 per cent of GDP. Similarly, recalling that after seven years the debt/GDP ratio is 80 per cent, it follows that the current account deficit will be rising over time to reach about 9 per cent of GDP during the seventh year. Consequently, this economy would be able to run current account deficits much larger than the 3.2 per cent sustainability benchmark for an extended period of time (seven years) before hitting the supposedly critical high debt level (80 per cent).

Finally, suppose for the sake of the argument that Mexico was trying to run an unsustainable large current account deficit and, realizing this, the capital market refused to extend any more credit to Mexico. Why would this result in a balance of payments crisis?

A balance of payments (BOP) crisis takes place when international reserves held by the official sector (normally at the central bank) threaten to fall below some minimum tolerable level. It should be recalled that as a matter of accounting, under fixed exchange rates, for example, international reserves are lost or accumulated if the demand for money falls or increases, respectively. Thus, to the extent that refusal to extend further credit to a given country does not affect the demand for money then, under fixed exchange rates, the stock of reserves will be intact and no BOP crisis will take place. Consequently, there is no obvious causal relationship going from current account sustainability difficulties to BOP crises.

To summarize, usual current account sustainability computations apply to steady state and could be very misleading, especially for reforming or transition economies. Furthermore, there is no obvious link between current account sustainability and BOP problems.[4]

8.3 KRUGMAN'S MODEL

The literature on balance of payments crises has developed along different lines. The classical example is Krugman (1979), which studies the sustainability of a fixed exchange rate regime, implicitly assuming that the government has no access to international credit and, thus, once reserves threaten to go below their minimum tolerable level, there is no option for the government but to abandon the peg. Therefore, this model goes to the heart of the kind of difficulties that forced Mexico to abandon its stabilization programme, but leaves unexplained why the government is unable to tap international capital markets.

A government's inability to borrow further in international markets could be the result of sustainability considerations of the sort discussed in previous section, or of other considerations that we will collect under the rubric 'liquidity constraints'. If the former considerations are relevant, then Krugman (1979) provides the missing link explaining BOP crises in the context of a current account sustainability model. However, this would make the present model liable to most of the criticisms raised against the sustainability approach. Fortunately, there is nothing in Krugman (1979) that requires the country to be running unsustainable large current account deficits. As will be seen when we discuss the formal model below, a key parameter is the fiscal deficit, which is only one component of the current account deficit (the other one being the excess of private sector investment over savings, that is, the private sector's current account deficit). I now turn to describe the model in greater detail.

The exchange rate is assumed to be fixed if there are enough reserves to sustain the value of the domestic currency (that is, if reserves are above or at their 'critical' or minimum tolerable level, which we assume to be zero); otherwise, the exchange rate is allowed to float freely. Furthermore, the government is assumed to run a fiscal deficit that is fully monetized. If we assume perfect capital mobility (for the private sector), no uncertainty, and perfect foresight, then the domestic interest rate is equal to the international one during the fixed-rates phase, and to the international interest rate *plus* the rate of devaluation, during the floating-rates phase.

Let the demand for real monetary balances be denoted by $L(i)$, $L'(i) < 0$, where i is the domestic nominal interest rate. Assuming PPP and no international inflation, we can identify the domestic price level with the exchange rate E. Let the government run a fiscal deficit that is fully financed by the central bank. Denoting the deficit in real terms by d, and the stock of international reserves at the central bank by R, we have:[5]

$$\dot{R}_T = -d \tag{8.6}$$

during the fixed-rates regime. This is so because the demand for money (monetary base in the present example) in real terms is constant at level $L(i^*)$, where i^* denotes the international interest rate. Equation (8.6) states that credit to government will result in reserves losses because the additional flows of domestic money that it entails are not demanded by the public. Given PPP, excess money supply cannot result in higher prices. Thus, there is no *internal* mechanism to get rid of excess money supply at equilibrium. But there exists an *external* mechanism, that is, exchanging excess money for international reserves – which is the implication of equation (8.6).[6]

Equation (8.6) is an important building block in Krugman's model, but not its 'clincher', which actually is showing that the loss of reserves will take a steep plunge down to their critical level exactly at the time the system switches from fixed to floating exchange rates (hereon referred to as 'switch time'). This is so for the following reasons.

First, after reserves are exhausted, the mechanism implied by equation (8.6) will not be available. Thus, the *external* mechanism for getting rid of excess money will no longer be operative. However, since the exchange rate is allowed to float, prices will now be able to rise in line with currency devaluation. Let the inflation rate (equal the rate of devaluation, due to PPP) be denoted by π. Then, during the floating-rates phase, we have:[7]

$$\pi L(i^* + \pi) = d \tag{8.7}$$

In other words, flow seigniorage from money creation is used to finance the fiscal deficit, which, of course, requires the inflation rate to be positive, implying an abrupt jump in the domestic nominal interest rate at switch time. Hence, as the economy switches to the floating-rates regime, the demand for money takes a precipitous fall.

Krugman argues (in the continuous-time version of the model) that under perfect foresight the exchange rate cannot jump at any time, because if it did then individuals would be able to reap unbounded arbitrage profits (recall the assumption of perfect capital mobility). Thus, at switch time the exchange rate exhibits no appreciation or depreciation.

Therefore, at switch time – which sooner or later has to arrive given the constant drain on reserves implied by equation (8.6) – we have:

$$\text{Loss of reserves at switch time} \equiv \Delta R = L(i^* + \pi) > 0 \tag{8.8}$$

A typical Krugman balance of payments crisis is depicted in Figure 8.1. Reserves are steadily lost during the period from 0 to T when reserves reach level ΔR. At that point in time, there is a run against domestic money and reserves fall down to zero (that is, a balance of payments crisis takes place). After time T, reserves remain at zero and inflation is positive (and constant, owing to our steady-state assumptions).

The most remarkable feature of a Krugman crisis is the sudden loss of reserves at time T, even though individuals have perfect foresight and, thus, nobody is taken by surprise. Therefore, the model has the ability of rationalizing, in a perfect-foresight context, an often-observed feature about balance of payments crises, namely, a speculative attack on the currency leading to the abandonment of fixed exchange rates. This was also a

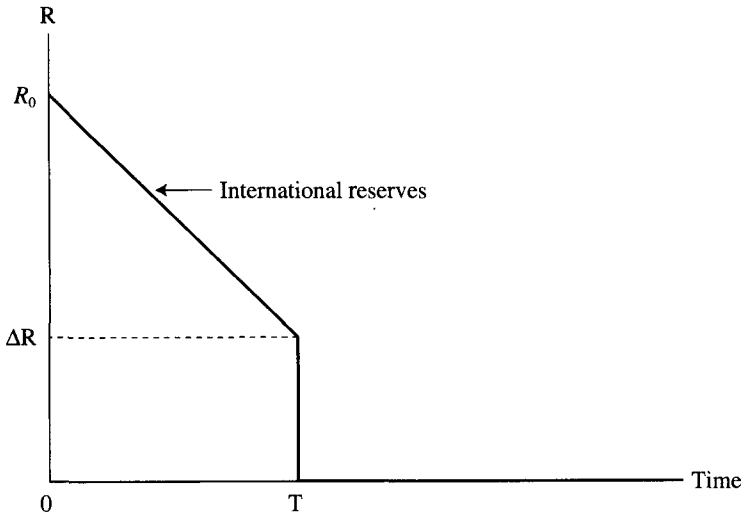

Figure 8.1 Krugman crisis

feature in Mexico where international reserves fell by $4 billion in two days preceding the crisis (see IMF, 1995).[8]

Notice that the current account deficit is not a key factor in this model. Of greater significance is the fiscal deficit, and in fact it is the rigidity of the latter that lies at the heart of the model – and helps to rationalize why this government would be unable to finance its deficit in a non-inflationary way. In other words, liquidity constraints in Krugman's model stem from the government's inability to cut the fiscal deficit *even after the BOP crisis takes place*.

Fiscal deficit rigidity is not explained by the model and is, undoubtedly, a very strong assumption. If, instead, the government was assumed to be committed to operate within its basic budget constraint (like equation 8.5) above, but involving only fiscal variables) then deficit finance would in principle be available to head off a BOP crisis, unless physical constraints impeded generating the corresponding future surpluses in a non-inflationary context. Thus, Krugman's example – as rendered above – is of limited interest for countries that express a clear desire to achieve non-inflationary fiscal equilibrium, as Argentina and Mexico before the recent crises.

An alternative interpretation of Krugman's model is that the crisis calls for a draconian fiscal adjustment and/or a fall in aggregate demand that results in significant output loss and, as a consequence, the government is

physically unable to lower the deficit *given the new circumstances*. More precisely, the assumption would be that the crisis lowers fiscal revenue as to prevent the lowering of the the fiscal deficit (although government expenditure may exhibit a significant cut) and, thus, requires the use of seignorage to avoid bankruptcy. Thus, in this interpretation, the crisis is explained by sustainability considerations of the type discussed in the previous section (except that here they apply to the government sector). However, the crisis itself plays an active role in generating the conditions under which sustainability considerations force the government to resort to higher inflation.

I believe the above twist to Krugman's story is relevant for understanding Mexico and Argentina. However, before going any deeper into this issue. I will first discuss other types of financial aspects that, in my view, played a crucial role in recent times.

8.4 FINANCIAL CONSIDERATIONS

Volatility of Monetary Aggregates

The above model focuses on fiscal deficits as the key factor for reserves losses. However, even in the absence of domestic credit expansion, in a regime of fixed exchange rates reserves rise or fall as a consequences of fluctuations in the demand for money. This is not a minor consideration for developing countries, because some of them exhibit substantially higher fluctuations in their demands for money than do advanced industrial countries. To illustrate the significance of these considerations, let us examine the case in which the (log) demand for money follows a random walk and, to abstract from the effects highlighted in Krugman's model, let us assume that the demand for money is totally inelastic with respect to the nominal interest rate, and that there is fiscal balance, that is, $d = 0$. To simplify the exposition, we will continue making the assumption that domestic prices equal the nominal exchange rate, which is kept constant unless there is a BOP crisis.

Letting m denote the demand for real monetary balances, then we postulate (in discrete time) that

$$\log m_{t+1} = \log m_t + \epsilon_t \tag{8.9}$$

where m stands for real monetary balances and ϵ is an i.i.d. random variable. Under these circumstances, the demand for money can fall and create

a BOP crisis, even though there is no fiscal deficit. If ϵ exhibits a mean-zero normal distribution then the larger is its variance and the larger will be the probability of a BOP crisis, given an initial level of international reserves. I have estimated the variance of ϵ under the above assumptions. Mexico, for instance, comes out with a relatively high standard deviation (about 4 per cent per month), while a country like Austria, which has successfully pegged to the Deutsche Mark for about fifteen years, shows a standard deviation of only about 1 per cent per month (see Calvo, 1996b). The main point is that BOP crises could be due entirely to financial considerations irrespective of fiscal performance.

In addition, problems could be exacerbated by external factors. For example, Calvo and Mendoza (1996) shows that there is a significant effect from US short-term interest rates on Mexico's demand for money (specifically, M2). This was reflected in a sizeable fall in the demand for money during 1994 and, I suspect, lay at the heart of the Mexican difficulties at the end of the year. I will further elaborate on this in what follows.

Mexico and other Latin American countries experienced sizable capital inflows in the first half of the 1990s. As argued by Calvo *et al.* (1993), about 50 per cent of these flows stem from external factors, among which US interest rates hold a prominent role. Capital inflows gave rise to an expansion in consumption and investment, which, in turn, increased monetary aggregates. Thus, the above-mentioned link between domestic monetary aggregates and external rates of interest may stem from direct opportunity-cost or indirect absorption-type considerations. Experience in several countries, most notably in Mexico, suggests that the fluctuations in monetary aggregates provoked by external factors – and more specifically, by capital flows – could be substantial (see Calvo and Mendoza, 1996: Calvo *et al.*, 1996).

An equation like (8.9), enhanced by taking explicit account of external factors, would be needed to assess the implication of different reserve levels. To illustrate, consider the simple case in which external factors are fully captured by the random term in equation (8.9). We proceed as follows. Let $v_t = m_t/R_t$, where R stands for international reserves, and let m be interpreted as the monetary base. Hence, a BOP crisis in period $t + 1$ will take place if $m_t - m_t + 1 < R_t$. Or, equivalently, if

$$\log \frac{m_{t+1}}{m_t} = \epsilon_{t+1} < \log \frac{v_t - 1}{v_t} \tag{8.10}$$

Clearly, the probability of a BOP crisis is an increasing function of v. Notice that this 'vulnerability' index is totally independent of the popular

index of reserves/one-month's-worth-of-imports. The latter hails back to periods in which reserves were held to ensure smooth trade, while the index developed here is associated with the probability of a BOP crisis as a result of financial fluctuations.

In the above example there exists a direct connection between m and R, because we assume m stands for base money (that is, monetary liabilities of the central bank). Were m to stand instead for M2 then the connection would be more indirect and would depend on how the central bank reacted to shocks in the larger monetary aggregates.

If the central bank is not responsible for banking problems but defends the exchange rate parity by intervening and swapping base money for international reserves, then the same analysis as that developed above is applicable, except that one has to derive the demand for base money from the M2 equation (8.9), minimum reserve requirements, and an equation describing the demand for banks' excess liquidity.

In turn, if the central bank is responsible for ensuring adequate banks' liquidity, then it may expand domestic credit whenever M2 falls. In the extreme case, in which banks are fully insulated from any liquidity loss as a consequence of a fall in M2, then M2 is equivalent to base money and the first example in this section is fully applicable. It is worth noting, however, that in practice M2 is much larger than money base and, hence, the probability of a BOP crisis, given international reserves, is likely to be higher than in the first example (unless the volatility of M2 is substantially lower than that of base money).

However, by providing liquidity to offset the fall in M2, the central bank does not prevent M2 from falling. Thus, if a central bank is keen on not letting monetary aggregates fall then it will increase domestic credit even more, and provoke a large loss of reserves after just a small contraction in monetary aggregates. This seems to have been the case in Mexico during 1994. As noted above, Calvo and Mendoza (1996) shows that the demand for M2 fell in 1994. Since banks held sizable domestic public debt in their portfolios, rolling back private debt could have been prevented simply by an open market operation that lowered domestic public debt in banks' portfolios by an amount equal to the fall in M2. However, the central bank went beyond that and prior to the crisis succeeded in stabilizing the level of M2. This meant a sizeable expansion of the banks' credit to the private sector (more than 40 per cent from January to December 1994). This is quite remarkable, given that these measures were undertaken as the country was suffering from a sizable loss of international reserves. Why was the central bank not content with stabilizing credit to the private sector?

A possible explanation for this phenomenon is that Mexico tried to keep the peso rate of interest within (what it deemed) reasonable levels (see Calvo and Mendoza, 1996). This was hard to achieve, given that the market expected the incumbent administration to devalue, in keeping with Mexico's history of presidential transitions. Under these circumstances, the misalignment between expectations and the target interest rate was likely to lead firms to repay foreign currency loans and borrow in domestic currency, putting an upward pressure on the peso-denominated lending and borrowing rates. This led banks to run down their stocks of peso-denominated public debt (CETEs) and substitute them with loans to the private sector. However, if one relies on the Calvo–Mendoza estimates then this situation was unsustainable, because the demand for M2 was bound to fall. This is an interesting case, because it shows that *if the government attempts to stabilize monetary aggregates, then no level of international reserves can prevent a BOP crisis once the demand for monetary aggregates take a plunge.*

Short-Maturity Debt

The BOP crisis literature has on the whole ignored the role of domestic debt, and followed Krugman (1979) in assuming that fiscal deficits are fully monetized. However, the assumption that fiscal deficits are fully monetized is becoming increasingly unrealistic, as governments have started to have access to the international capital market. It has, thus, become increasingly possible to finance fiscal deficits by floating domestic or international public debt. The maturity structure of this debt varies across countries, but it is perhaps fair to say that emerging markets governments are likely to exhibit a debt maturity structure slanted towards the short end of the spectrum. Mexico again shows an extreme case in this respect, since in December 1994 about $10 billion domestic debt was due to mature in January, and about $30 billion during 1995 (these are large numbers, compared with the $6 billion stock of international reserves held by Mexico prior to the crisis).

As argued in Calvo (1995), the demand for emerging markets' assets (including public debt) could be highly volatile for two basic reasons. In the first place, the effective rate of return on these assets depends on policy – like everywhere else, but with the added complexity that policy in emerging markets is itself highly volatile, reflecting imperfect knowledge of structural parameters and, most importantly, relatively unstable political equilibria. The instability of the latter is likely to have increased after the breakdown of communism. Therefore, assessing the 'state of nature' in an

emerging market could be quite costly. It is not enough to know the particulars of the investment project, because, in general, its profitability will depend on government regulations. Thus, a project could be very lucrative and yet be unattractive to foreign investors if, for instance, profits are expected to be subject to high taxes (either directly or through the imposition of, for example, foreign exchange controls). Consequently, *assessing the state of nature in a given emerging market is likely to entail large 'fixed' costs.*

The second basic ingredient for high volatility of demand for emerging markets assets is the so-called 'globalization' phenomenon, which is characterized by the fact that investors diversify their portfolios across a large number of emerging markets. Portfolio diversification, in the absence of tequila or contagion effects, helps to lower portfolio risk. Interestingly, however, the benefit from portfolio diversification does not depend on specific knowledge about the actual state of nature in these economies. For risk-hedging, the return on the different assets across countries should not be perfectly correlated. Thus, for instance, by the law of large numbers, risk could become very low were the different investment projects to be stochastically mutually independent.

It is intuitive, and can be shown rigorously in a canonical example (Calvo, 1995), that under the above circumstances (that is, high information costs and globalization) investors will be (1) very sensitive to 'news' about expected returns and, furthermore, (2) their incentives to learn about the state of nature in each emerging market will eventually decrease as the number of emerging markets rises. Consequently, it is likely that in a globalized capital market investment in emerging markets assets will be highly sensitive to rumours, and relatively unresponsive to 'fundamentals'.

The above-mentioned volatility poses no direct threat of a BOP crisis, to the extent that it involves only fluctuations in stock market prices. However, if a large chunk of domestic debt is coming due in the short run then adverse changes in investors' sentiments about a given emerging market may cause a BOP crisis, particularly if the exchange rate is held fixed. The only policy available under those circumstances (short of devaluing) is to raise interest rates on newly issued domestic debt. Unfortunately, because investors are ill informed about fundamentals, the interest rate hike could possibly be taken as a sign of weakness and not of strength, because they may feel that higher interest rates are due to the 'market' being aware of serious difficulties. Furthermore, even though investors were not all that ill informed, I later argue (in Sections 8.5 and 8.6) that this bonds attack phenomenon could lead to socially

costly crises (along the lines mentioned at the end of the previous section).

Domestic Debt and Credibility

In addition, the existence of domestic-currency-denominated public debt can generate BOP difficulties if the exchange rate policy is not fully credible. Suppose the government announces fixed exchange rates, but the public believes that the currency will be devalued in the next period by a factor ϵ with probability p. Then, if investors are risk-neutral (in terms of foreign currency), the nominal interest rate satisfies:

$$\frac{1+i_t}{1+\epsilon}p+(1+i_t)(1-p)=1+i^* \tag{8.11}$$

where i and i^* are the domestic and international one-period interest rates, respectively. Clearly, if ϵ and p are positive numbers then the domestic interest rate will exceed the international one. This phenomenon is called the 'peso problem' and is a common characteristic of exchange-rate based stabilization programs.

Suppose the government has a fixed debt level b and the primary fiscal surplus is equal to interest on domestic public debt *if the exchange rate peg was fully credible*, that is, if $\epsilon = 0$. Thus, under full credibility the fiscal deficit (which we called d in equation (8.6) would be zero. Assuming, for simplicity, that fiscal deficits are fully monetized, then it follows that the discrete version of equation (8.6) becomes:

$$R_{t+1}-R_t=(i^*-i_t)b \tag{8.12}$$

if the currency is not devalued. Hence, the peso problem may put into motion Krugman's BOP crisis machinery. In this fashion, lack of credibility may result in an unsustainable balance of payments, even though 'fundamentals' could be fully in line with a sustainable situation.

Credibility, the Demand for Money and Fiscal Deficit

Credibility problems may be reflected through other more subtle but equally important phenomena. For example, there is general consensus that lack of credibility may lead to a consumption boom during the early stages of an exchange-rate-based stabilization program (see, for instance, Calvo and Végh 1993, Kiguel and Liviatan, 1992). Therefore, the demand

for money will contain a cyclical component associated with the stabilization programme. Higher monetization at the start of the programme may give the impression to policy-makers that the program enjoys a high degree of credibility. An argument one commonly hears from policy-makers is that higher monetization reflects the return of flight capital due to the higher confidence inspired by the stabilization plan. While this is partially true, policy-makers may wrongly conclude that the higher stock of real monetary balances is a permanent positive shock. However, if monetization is provoked by the expectation that the programme will be abandoned in the non-too-distant future, then the real stock of money will eventually collapse, possibly generating a BOP crisis.

In a recent study Talvi (1996) shows that if tax revenue is an increasing function of consumption then prior to crisis the fiscal deficit could shrink, giving the false impression that the fiscal house is in order. In an example, Talvi shows that the fiscal deficit is nil before the crisis, only to explode afterwards. This pattern of the fiscal deficit is understandably quite confusing to the average policy-maker. It is not unusual for the initial slackening of the fiscal constraint to be read as an indication that tax evasion has fallen and, hence, that the higher fiscal revenue has a significant permanent component. As a result, considerable political pressure is built up for more government spending. Unfortunately, if imperfect credibility is the key reason for the initial consumption boom, and policy-makers give in to pressures to increase government expenditure, then after-crisis fiscal deficits could reach dangerously high levels – which will become apparent only after a crisis erupts and policy-makers have little room to manoeuvre.

8.5 OUTPUT COLLAPSE

This chapter has argued that the usual current account sustainability algebra leaves a lot to be desired, and receives little empirical support. Furthermore, it has discussed the mechanics of a BOP crisis in a model that focuses on fiscal sustainability (a close relative of current account sustainability). The latter approach was argued to be closer to the mark as an explanation for BOP crises, and extensions showed that the model can accommodate a set of highly relevant features related to capital market globalization. However, none of those models is capable of explaining the sharp output collapse in Argentina and Mexico. For that, we need to develop some links going from BOP crisis to output collapse.

In this section I examine two such links: (1) Keynesian price/wage stickiness, and (2) supply-side effects.

Price Stickiness

As background, let us take the BOP crises scenarios discussed in Sections 8.3 and 8.4. In addition, we will assume that the price level is downward-inflexible in the short run. First, consider an anticipated BOP crisis, as in the simple Krugman model. As I have argued in Section 8.3, the exchange rate will not jump when crisis hits, and afterwards it will show an upward trend. Thus, at first blush, the crisis does not seem to call for downward nominal flexibility. However, this intuitive reasoning ignores the complexities of a sticky-prices world.

Consider, for example, the case in which there are tradable and non-tradable goods. If prices are perfectly flexible then Calvo (1987) shows that – in a cash-in-advance, perfect-foresight world – the relative price of non-tradables with respect to tradables will exhibit a one-step rise before crisis, and a collapse to a lower plateau afterwards. This is so because inflation is expected to rise in the future, which, as argued earlier, gives rise to a consumption boom. Because the supply of non-tradables is less than perfectly elastic, their equilibrium relative price must rise. However, perfect price flexibility ensures that the economy will always be on its full-employment transformation frontier and, thus, the model is not enough to rationalize the fall in output observed in Argentina and Mexico.

One can extend the above model to allow for price stickiness. For example, let us assume that tradable goods exhibit perfectly flexible prices, while non-tradable goods prices are set in advance in a staggered fashion. In this setup one can show that, prior to crisis, prices of non-tradable goods will be higher than their after-crisis equilibrium level. This is so because the forces discussed in the perfectly-flexible-prices case are still at work. Although price setters take into account after-crisis conditions (calling for lower prices for non-tradables), they take advantage of booming circumstances prior to crisis, and set prices higher than their after-crisis, full-capacity-utilization equilibrium level. Thus, when crisis erupts the non-tradable sector will go into a state of excess capacity and GDP will fall for Keynesian reasons.

In a Keynesian-type world, governments can offset the fall in GDP by printing money and triggering a currency devaluation. However, as noted in Section 8.3, this would be inconsistent with perfect foresight. If governments were expected to resort to this type of expansionary policy after a

BOP crisis, then no crisis-prone fixed exchange rate system would be sustainable under perfect foresight.[9]

Because governments are always tempted to resort to expansionary policies and, in practice, BOP crises are accompanied by sharp currency devaluations, then, by the above considerations, the Keynesian scenario is likely to be more relevant in cases in which BOP crises contain an important *unanticipated* component.[10]

Let us consider an unanticipated attack, of the sort Mexico faced in which short-term foreign-currency-denominated public bonds holders refuse to roll over their bonds and cause a sudden loss of international reserves. Under these circumstances, if remaining reserves are not sufficient to accommodate the Krugman-type fall in the demand for money then the currency will have to depreciate. Prior to depreciation, the relative price of non-tradables will be too high to ensure full capacity utilization. However, currency depreciation will help to move it towards full capacity utilization. In addition, if government can accurately assess the situation then it can control domestic credit to lock the economy into full capacity utilization, and GDP need not fall!

Therefore, according to the above point of view, the Mexican and Argentinean downturns are the consequence of *insufficient devaluation* after mostly unanticipated shocks. If the exchange rate had devalued further then no output loss would have taken place.

The last corollary sounds highly unrealistic. Non-tradables are not just one type of good but a wide variety of goods. Thus, in more realistic circumstances the exchange rate cannot solve the excess-capacity problem for all sectors, unless it generates overheating in the whole economy. Overheating is not a solution, because it substitutes one problem for another. However, even in the more realistic restatement of the Keynesian model (allowing for a variety of nontradable goods), the large output loss in Mexico was probably excessive and could have been avoided by a more lax monetary policy.[11]

The implication that emerges from the Keynesian approach is that appropriate monetary policy could prevent major output losses after BOP crises. Furthermore, if the government is solvent then appropriate monetary policy could stave off major crises. Small hiccups could be unavoidable, but major debacles should on the whole be fully preventable.

In practice, after a major débâcle like that in Mexico, policy-makers become wary to resort to expansionary policies. A dominant concern is that the initial devaluation will be followed by a price–wage–exchange-rate spiral. Although this is a legitimate concern, in my opinion the inflationary spiral is partly, if not largely, the consequence of lack of

understanding on the part of the country's key players (policy-makers, trade unions and so on). For example, it is not unusual that in order to avoid falling into a high-inflation mode, nominal wages (especially in the public sector) are used as a nominal anchor. This leads to below-equilibrium real wages, labour unrest, and so on, which cause supply-side negative output shocks, a decline in the demand for money, and higher inflationary pressures. Furthermore, this lopsided devaluation is likely to result in a real (over) depreciation of the currency, thus hurting trading partners. Mexico, for example, had recently joined the NAFTA and a large devaluation (not accompanied by an equiproportional rise in wages) would have strained the relationships between Mexico and the USA (in particular) – especially if the lopsided devaluation was seen as a conscious policy decision on the part of Mexican authorities.

So far we have taken a Mexico-style Tesobono attack as fully exogenous. However, if solvency is not at stake then the country should have been able to regain access to international capital markets, undoing the negative effects of the initial attack. Thus, although this is a useful piece of analysis, it is not enough to explain deep recession after crisis. The next subsection deals with this issue.

Supply-Side Effects

In this subsection I explore two possible channels: (1) credit, and (2) fiscal adjustment. In both cases, the driving force will be an unanticipated shock in the capital account of the balance of payments, based on negative expectations that, in equilibrium, turn out to be confirmed. (Hence, the reader should be warned that he or she is entering the world of self-fulfilling prophesies.)

Suppose a country is running a current account deficit financed by a surplus in the capital account. Consider the case in which rumours circulate about the country's inability or unwillingness to service its debt (domestic or international). In line with the comments in Section 8.4 about the high sensitivity of investors with respect to 'news', we further assume that the negative rumours lead to a sudden drying up of new funds to the country. The latter calls for an abrupt adjustment in the current account of the balance of payments, and a fall in the relative price of non-tradables with respect to tradables (that is, a real depreciation). Since the shock is unanticipated, real depreciation implies that some outstanding loans are likely to become non-performing, and bankruptcies will rise. More importantly, in a complex industrial economy in which firms are linked, directly or indirectly, by an inter-enterprise-credit network, even those firms that

have not been directly unfavourably hit by the relative price change could stop being creditworthy. Consequently, output will fall for direct reasons (for example, bankruptcies, litigation costs), and for indirect ones (for example, losing access to bank overdraft facilities owing to a rise in systemic risk). In the end, both borrowers and lenders may decide that it is optimal to stop the flow of new funds to the country, validating expectations. Notice that this example does not require the existence of rationing in the final equilibrium, since everybody will be content with the lower flow of funds. Moreover, the crisis need not be prompted by the realization of any kind of current account or fiscal deficit unsustainability. And, finally, the fall in domestic profitability need not be considered permanent for it to bring a sudden stop in capital inflows. If investment decisions have some degree of 'irreversibility' – as recently highlighted by Dixit and Pindyck (1994) – then the associated increase in the variance of relative prices may induce potential investors and lenders to wait a little longer until the 'dust' settles, bringing the flow of funds to a screeching stop.

The second channel (that is, fiscal adjustment) is akin to the Tesobono crisis in Mexico. Suppose investors refuse to roll over maturing public debt. A solution is to find a new set of investors that would fill up the vacuum. However, if the shock was unanticipated then information problems may hinder finding new investors, because they might take the refusal of the previous set of investors as a signal that bad news is afoot. Consequently, in the short run the government would be forced to finance the principal of maturing bonds by engaging in sharp cuts in government expenditure or by resorting to tax surcharges that can be easily collected. In practice, government expenditure is difficult to cut. Recent experience shows that cuts often fall either on public investment – having an eventual deleterious effect on output, or public sector on real wages – having immediate negative output effects by causing labour strikes, and so on. Furthermore, taxes that are effective in raising revenue in the short run tend to be highly distorting, for example, import tariffs, gasoline taxes, and so on. Even when the authorities react by raising a homogeneous VAT rate, the policy is likely to be distorting because compliance is highly uneven. As a result, the strong fiscal adjustment may have negative effects on present and/or future output, lowering the marginal productivity of capital. Thus, for reasons similar to the ones raised in connection with the previous example, net capital inflows may fall, validating expectations.

Does price/wage stickiness exacerbate or ameliorate the effect of the above capital account shocks? This is a difficult question, which is unlikely to have an unambiguous answer. It is worth pointing out,

however, that if supply effects are dominant then a devaluation could make things worse, because the resulting change in relative prices may exacerbate the bad-loans problem.[12]

8.6 RECAPITULATION – POLICY ISSUES

The current account approach applies to situations in which *solvency* is the key problem behind BOP crises. However, none of the countries involved in the tequila episode fall clearly in that category. On the other hand, the seminal model in Krugman (1979) refers to *unrepentant* governments that persist running unsustainable fiscal deficits even after a BOP crisis takes place. This approach is not very appealing, when countries are keen on eliminating fiscal deficits. However, our discussion has extended Krugman (1979) by bringing financial, Keynesian and supply-side considerations to the discussion, increasing the empirical relevance of the model. The major conjecture suggested by the analysis is that *unanticipated* shocks seem crucial for rationalizing recent crises, and that the large output fall reveals the existence of multiple equilibria. Under this interpretation, Argentina and Mexico were each pushed from a 'good' to a 'bad' equilibrium. In this section I discuss some issues linked to this viewpoint.

Good policy advice requires a thorough understanding of equilibrium-multiplicity models. A key question in this respect is, Why would the economy settle on one particular equilibrium? In my opinion, there is no plausible answer to the question *in the context of an equilibrium-multiplicity model*. However, it is easy to append an equilibrium-multiplicity model with additional relevant equations that help to pin down a unique equilibrium. As argued in Calvo (1996a, Introduction to Part II), however, these models yield equilibria that, although unique, are highly sensitive to parameter changes. This outcome is in line with the recent tequila episode. Economies that had equilibrium-multiplicity conditions in their 'cores' were badly hit (Argentina, Mexico), while those that did not quickly returned to their pre-tequila conditions (Chile, Hong Kong).

In the present interpretation, a key lesson is that policy-makers should avoid creating conditions that are conducive to multiple equilibria. Factors that may help create those conditions are, for example: (1) large short-term public debt, particularly if it is held by 'pure' investors (that is, deriving no liquidity services from those assets), (2) a large expansion of monetary aggregates relative to international reserves, (3) large expansion of bank credit coupled with insufficient supervision, (4) existence of a mostly local banking industry with little support from the international

financial community, (5) maturity mismatch between deposits and loans, and (6) large current account and/or fiscal deficits relative to international reserves (net of the amounts needed to repay short-term public debt and bail out the banking system in case of a run). Points (1) to (5) are straightforward implications of previous discussion (see also Calvo, 1996b). However, point (6) requires some further elaboration.

Point (6) is an implication of the previous section's discussion. It bears some resemblance to the current account approach examined in Section 8.2, but it does not rely on that approach's arithmetic. Large current account deficits, for example, could be undesirable, even though the country is solvent. A drastic cut in internationally financed consumption accompanied by supply-side effects, for example, may bring about a situation in which consumers and investors feel that it is optimal for them to lower, or at least not to increase, their total indebtedness, making the initial cut consistent with no-quantity-rationing equilibrium. If the government has enough reserves then it can implement a counter-cyclical policy that offsets the initial credit cut. However, international reserves must be large enough to cover other short-run government obligations. Otherwise, the government could substantially increase its vulnerability to a BOP crisis. For that reason, a key piece of information for gauging how large is the current account deficit is the level of reserves net of short-run government obligations (for example, stock of bonds maturing in the short run, implicit or explicit government's commitment to help banks in case of a liquidity crunch, and so on).

Current Account Deficit, Openness and Output Contraction

The size of the current account deficit must be normalized by some index of trade openness. The same current account deficit as a share of GDP may have radically different implications, depending on the share of tradable goods in GDP. To illustrate this point, consider the simple case in which there is no capital accumulation, and thus expenditure takes the form of consumption only. There are two types of goods: tradables and non-tradables. Intertemporal utility is time-separable, and the instantaneous utility index is homothetic. Hence, given the real exchange rate (that is, the relative price of tradables in terms of non-tradables), these two types of goods are consumed in constant proportions. Let us normalize prices and exchange rate to unity. We denote by c_T, c_{NT}, y_T and y_{NT} the consumption and production of tradables T and non-tradables NT, respectively. Output of tradables is exogenous, while output of non-tradables is demand-determined, that is $y_{NT} = c_{NT}$. Therefore, GDP = $y_T + c_{NT}$, and the

current account deficit as a share of GDP satisfies (ignoring transfers and factor payments):

$$CAD = \frac{c_T - y_T}{y_T + c_{NT}} \tag{8.13}$$

Let us denote

$$\gamma = \frac{c_T}{c_{NT}} \tag{8.14}$$

and consider the case in which the current account deficit shrinks to zero. Hence, by equations (8.13) and (8.14), and given the real exchange rate, we have

$$\frac{\Delta \text{GDP}}{\text{GDP}} = -\frac{1}{\gamma} CAD \tag{8.15}$$

Consequently, if we measure a country's openness by γ, then the impact on GDP of a sudden shrinkage of the current account deficit is inversely proportional to openness. Openness, γ, is affected by the real exchange rate and, *ceteris paribus*, γ declines as the currency exhibits real appreciation. Therefore, output contraction associated with an elimination of the current account deficit increases, the larger are the real currency appreciation and the initial expansion of the nontradable sector.

General Policy Implications

Elimination of equilibrium–multiplicity conditions is costly. For example, it may call for an enormous accumulation of net international reserves. Therefore, in general, economies are likely to exhibit some vulnerability to exogenous shocks. However, what is large for an individual country could be small for, say, its trading partners that have a stake in that country's stability. Thus, it could be to everybody's advantage to set up a contingency fund to prevent BOP crises. This is of course an old idea that dates back to the creation of the Bretton Woods institutions. However, as was seen in the case of Mexico, available sums from international financial institutions could be small relative to the size of capital account crises. The Mexican rescue package necessitated concerted action on the part of the IMF, the US Treasury and the G-10. In the Bretton Woods world international funds were necessary to cover trade balance deficits. In the new world of

fluid capital mobility, funds could be necessary to avoid a massive collapse of the banking system. Six months' worth of imports hardly exceed 20 per cent of GDP, while M2 can easily surpass 40 per cent of GDP.[13]

Nevertheless, in the near future emerging markets are likely to be vulnerable to exogenous shocks. It has now become clear to professional investors that vulnerabilities exist independently of how well designed are certain structural reforms. This is likely to imply that investors have become much more sensitized, and will be closely watching vulnerability indicators. Thus, countries that exhibit stock vulnerabilities (for example, large M2/Reserves ratios) will be kept in the list of suspects, even though they exhibit healthy flow statistics, like fiscal or current account surpluses.

8.7 FINAL WORDS

The short answer to the question raised in the title of this chapter is that 'the market' is unforgiving, because a crisis may set in motion negative factors that sharply change the country's economic outlook. However, the power of 'the market' to modify a country's equilibrium is a function of how vulnerable the country is to self-fulfilling prophesies. Mexico, for example, had exposed itself to self-fulfilling prophesies by creating a large maturity mismatch between its liabilities and assets, dollarizing its liabilities and placing them in the hands of pure investors. Argentina had a longer maturity bond structure and could, therefore, 'ride the storm' from a financial point of view. However, in both cases the crisis brought about a sharp reduction in the current account deficit, which generated Keynesian and supply-side effects (partly associated with the pro-cyclical fiscal policy in the IMF-sponsored adjustment programmes). Therefore, 'the market' is unforgiving because the initial turmoil – which 'the market' is largely responsible for, but which could have been avoided had countries paid more attention to controlling their vulnerabilities – generates conditions that make it incentive-incompatible for the former 'good' equilibrium to be revived.

The tequila effect has shown how relevant the factors discussed in the present chapter are for a world of high capital mobility. For this world to be improved, countries will need to be more watchful of stock and flow vulnerabilities, and the financial community will need to attain a much higher level of international cooperation. This cooperation will have to involve not only significantly larger funds, but also their much more automatic availability.

Notes

1. I am grateful to Carmen Reinhart for useful comments.
2. Unemployment in Argentina had never been a serious problem. Prior to the Convertibility Programme, unemployment had seldom exceeded 6 per cent. However, unemployment rose steadily from 1991 onwards, reaching about 13 per cent prior to the tequila effect. Hence, the tequila effect appears to have added from 5 to 6 percentage points to the rate of unemployment.
3. It should be noted that the same analysis would not single out Argentina as a current account derelict, because its current account deficit was about 3.7 per cent of GDP in 1994, and growth exceeded 4 per cent.
4. Thus, it is not surprising that the empirical literature has found no significant relationship between current account deficits and BOP crises. See, for instance, Frankel and Rose (1996), Kaminsky and Reinhart (1996) and Sachs *et al.* (1996).
5. In what follows, it is assumed, for simplicity, that output growth rate $\eta = 0$, and that either international reserves earn no interest or the deficit d is net of interest on reserves.
6. Individuals may want to invest these funds in the capital market or increase their expenditure, depending on factors that the present discussion need not be specific about.
7. In case the following equation has more than one solution, we will assume that the economy settles to the one exhibiting the lowest π. We assume that the economy follows a steady-state equilibrium path, because, in line with the rational expectations literature, we rule out explosive perfect-foresight paths.
8. However, as discussed in Calvo and Mendoza (1996) and Flood *et al.* (1996), monetary aggregates did not collapse as predicted by the theory. This is further discussed in Section 8.5 below.
9. This argument is parallel, although far from equivalent, to the one developed in Flood *et al.* (1996), according to which no crisis-prone fixed exchange rate regime is sustainable under rational expectations if individuals expect the government to insulate money supply from changes in international reserves (that is, full sterilization).
10. Another reason for the relevance of unanticipated shocks is that price stickiness would be hard to justify if the timing of the BOP crisis was accurately predicted by the public.
11. According to this perspective, Argentina's policy was even more excessive because the exchange rate was pegged to the US dollar.
12. This is an area in great need of further theoretical analysis.
13. For an extended discussion of these issues, see Calvo and Goldstein (1996).

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9 'Big Bang' versus 'Go Slow': Indonesia and Malaysia

Anwar Nasution

9.1 INTRODUCTION

Two recent changes in the management of the Indonesian and Malaysian economies have altered the economic environment in which their central banks operate and the instruments used to control monetary aggregates. First, adjustment programmes adopted in these countries since the early 1980s have moved the management of their economies to a more market-based system. In general, these adjustment programmes have changed each country's development strategy from a policy of state-led, import-substituting industrialization (ISI) to one of private-sector-led export orientation (EO). Second, both countries have improved the infrastructure of their financial markets by adopting the CAMEL (capital adequacy, asset quality, management, earnings and liquidity) system, under which capital adequacy, asset quality and liquidity are the key variables. On capital adequacy, both countries use the risk-based-capital guidelines for all banks as suggested by the Basle Supervisors' Committee in 1987. The guidelines bring a full range of on- and off-balance-sheet assets into the risk-based system. A harmonized risk-weighting system has been developed to assess the different degrees of risk associated with each category of assets.

The impetus for the reforms in these two countries was the world economic recession of 1981–3, which depressed the prices of their export commodities, particularly petroleum. The sharp decline in export earnings and government revenue forced them to re-evaluate their development strategy, including fiscal, trade, financial, investment and labour policies. The financial liberalization, which included removal or relaxation of financial repression, capital controls and the policy to lower barriers to entry in financial industry, has increased competition between banks and non-bank intermediaries.

The subsequent rise in exports and domestic interest rates, and improvements in financial services, have improved domestic savings mobilization

and resource allocation. The reforms, however, have diminished the autonomy of the two countries in directing monetary policy for attaining domestic policy targets. By definition, internal deregulation shifts the interest rate decision to the market. External deregulation, which relaxes capital controls, on the other hand, increases capital mobility and makes it sensitive to interest rate differential and exchange rate expectations. Closer integration of the domestic market for financial assets, goods, services and labour with international markets, therefore, makes the domestic economy more sensitive to foreign economic events and policies.

The purpose of this chapter is to contrast the gradual process of financial sector reform in Malaysia with the rapid one in Indonesia since the early 1980s. This study focuses mainly on reform in the banking sector, because it is the core of the financial system and the main channel for the private sector's short-term capital inflows into these countries. Along with deregulation, the authorities in these countries have strengthened rules and regulations, stepped-up prudential measures and developed money markets.

The rest of this chapter is divided into seven sections. Section 9.2 discusses the structure of the financial sector in each country and the influence of the central banks on it. Section 9.3 analyses the leadership and sequence of the financial sector reform. Section 9.4 summarizes the contents of the reforms. Section 9.5 investigates programmes to restructure the distressed banking industry. Section 9.6 describes policies to develop money markets. Section 9.7 analyses the impacts of the reforms on monetary aggregates. Concluding remarks are provided in the last section.

9.2 THE STRUCTURE OF FINANCIAL INDUSTRY

The economic environment and market infrastructure have been more conducive to growth of the financial system in Malaysia than they have in Indonesia. First of all, political and social systems in Malaysia have been relatively stable. This country also has a well-established market infrastructure, particularly the legal and accounting systems. In contrast, from the beginning of World War II to the first half of the 1960s, Indonesia had been constantly in political turmoil, with successive civil wars, hyperinflation, monetary purges, nationalization of private assets and economic stagnation. Moreover, as shown in Table 9.1, Malaysia has higher income per capita (1993: $3140) than Indonesia (1993: $740). In the World Bank's classification Malaysia belongs to the upper-middle-income group and Indonesia is in the lower-middle-income group.

The financial repression during the oil boom period in the early 1970s hindered development of the financial sector in these countries. The financial repression was a part of the policy they had adopted to channel the oil windfall for pursuing economic nationalism and to redress racial economic imbalances. As a result, the oil money was used to finance import substitution industrial policies and to provide credit at subsidized interest rates to target groups and economic sectors. As will be discussed in later sections, the abuse of the programmes for patrimonialism and outright corruption has been more profound in Indonesia than in Malaysia.

When Malaysia and Indonesia started their broad-based economic reform, their economies were relatively stable. With an annual average inflation rate of 2.2 per cent in the 1980s, Malaysia belongs to a group of countries with a low inflation rate. In contrast, Indonesia belongs to the group of countries with a moderate inflation rate, at 8.5 per cent per annum (Table 9.1). The movement toward a private-sector-oriented economy has reduced the share of government expenditure in both countries. Between 1985 and 1993, public spending, measured as a percentage of GDP, was reduced from 31.4 to 25.4 per cent in Malaysia and from 23.5 to 16.3 per cent in Indonesia. During the same period, the fiscal deficit was reduced from 5.7 per cent to –0.2 per cent in Malaysia and from 3.7 per cent to 0.4 per cent in Indonesia.

The fiscal deficit has not been the prime source of credit expansion in these countries. In the case of Indonesia, the deficit has been financed by external borrowings, particularly from official sources at concessionary terms. Because it has already been graduated from being a recipient of official development assistance, Malaysia finances its budget deficit primarily by selling government bonds in the domestic market. To ease the rising burden of external debt service, both countries have adopted a policy to make substantial repayments of public external debt by using the rising revenues from privatization of state-owned enterprises. These two countries have also reformed their tax systems in order to raise revenue from domestic taxation and thereby reduce the need for external financing. The decline in budget financing from external borrowings has reduced the sensitivity of their governments budget expenditures to exchange rate and interest rate risks. Real interest rates in Indonesia were negative until the June 1983 liberalization, whereas in Malaysia they have always been positive.

Tables 9.2 and 9.3 indicate that, in terms of total assets and number of institutions and their branch offices, the core of the financial sector in both Malaysia and Indonesia is still the banking system. Other financial institutions, such as those in the capital market, leasing companies, insurance

Table 9.1 Malaysia and Indonesia: key macroeconomic indicators, 1970–93

Economic indicators	*Malaysia*		*Indonesia*	
	1970–80	*1980–93*	*1970–80*	*1980–93*
1. Average annual rate of inflation (%)	7.3	2.2	21.5	8.5
2. Average annual growth rate of GDP (in per cent)	7.9	6.2	7.2	5.8
3. Income per capita (USD, 1993)	*1970*	*1993*	*1970*	*1993*
Gross national product		3 140		750
PPP estimate		8 400		5 150
As percentage of GDP	*1985*	*1993*	*1985*	*1993*
4. Total expenditures	32.9	25.4	23.5	16.3
5. Fiscal deficit	5.7	–0.2	3.7	0.4
6. Domestic Savings, Capital Formation and Resource Gap (as per cent of GDP):	*1975*	*1994*	*1975*	*1994*
Gross domestic savings	23.8	35.6	21.0	38.7
Gross capital formation	23.4	37.2	20.3	35.5
Resource gap	–0.5	1.6	–0.7	–3.2
7. Nominal interest rates of banks (annual average, %):	*1980*	*1993*	*1980*	*1993*
Deposit rates	6.2	7.2	6.0	20.4
Lending rates	7.8	8.1	...	20.2

Sources: World Bank, *World Development Report 1995*; EDRC, Asian Development Bank, *Key Indicators of Developing Asian and Pacific Countries 1995*, vol. XXVI.

firms, unit trusts and building societies are fast-growing segments of the financial system. As of December 1994, the banking system of Malaysia consisted of Bank Negara Malaysia (the central bank); 37 commercial banks; Bank Islam Malaysia Berhad; 45 finance companies; 12 merchant banks; 7 development finance companies; 7 discount houses; and 8 money and foreign exchange brokers that are regulated and supervised by Bank Negara Malaysia. Of the commercial banks 21 are domestically owned and the remaining 16 are foreign-owned.

To comply with the Banking and Financial Institutions Act of 1989, the 14 branch offices of foreign banks were locally incorporated in 1994. Seven of the domestic commercial banks belong to tier I (well-managed with strong financial standing) institutions and are authorized to deal with foreign exchange transactions. The commercial banks account for about 85 per cent of the total assets of the banking system. In terms of total asset and number of branch offices, the state-controlled Bank Bumi Putra Malaysia Berhad and Malayan Banking Berhad are the lead banks. Although Malaysia has no official state-owned bank, state-owned companies do hold major shares of banks – for example, Petronas – the state-owned oil company – is the major shareholder of Bank Bumi Putra Malaysia.

The banking system in Indonesia, as of March 1994, consisted of Bank Indonesia, which serves as the central bank; 7 state-owned commercial banks; 163 national private commercial banks; 39 joint venture banks; 27 commercial banks owned by provincial governments; 1 Islamic bank (Bank Muamalat); 8757 rural banks; 13 merchant banks; and a number of money and foreign exchange brokers all of which are regulated and supervised by Bank Indonesia. Of the commercial banks 67 were licensed to deal with foreign exchange transactions.

Consisting of development finance corporations and investment finance corporations, NBFIs – non-bank financial institutions – operating in both Malaysia and Indonesia are linked to commercial banks. In theory, the first type of NBFI is similar to a development bank, because its activity is focused on medium- and long-term financing and equity participation. The activities of the second type of NBFI are similar to those of a merchant bank, acting as intermediary and underwriter of financial papers and providing financing for medium- and long-term investment. However, because of the narrowness and shallowness of domestic money and capital markets, NBFIs in these countries provide short-term business finance and loans for the purchase of consumer durable goods such as motor vehicles.

The largest institution in the group of NBFIs in Malaysia is the state-controlled Employees' Provident Fund (EPF), which mobilizes

contractual savings in the form of provident and pension fund contributions. At the end of 1990, this fund accounted for over 22 per cent of the total assets of the financial system. The operations of NBFIs and their impacts on money supply will be discussed further in Section 9.7.

There are four financial ratios that measure roughly the size of financial system relative to the size of the total economy, as presented at the bottom of Table 9.3. They, respectively, measure the percentage share of narrow money (M1), broad money (M2), total assets of all types of financial institutions (TAFI), and equity shares to the gross domestic product (GDP). The first two ratios are standardized across countries because of standardized statistics compiled by the IMF. However, they only cover the monetary liabilities of the central bank and deposit money banks (DMBs).[1] M1 includes currency, coins, demand or checking deposits and other current deposits that are highly liquid.[2] M2 is equal to M1 plus the less liquid savings and time deposits, money market mutual fund shares available for individuals, overnight repurchases agreements, and foreign exchange deposits at DMBs that are not directly utilized as a means of payments. Even though they are denominated in foreign currency, the characteristics of foreign currency deposits are similar to those of other components of quasi-money.

Authorized DMBs in Indonesia and Malaysia are allowed both to receive deposits from and to lend to residents in foreign currency. Mainly because of economic overheating, the share of dollar deposits – as a percentage of M2 – at DMBs in these countries has increased rapidly since 1991. TAFI provides a rough indicator of growth and structural change of the financial system. However, it also has disadvantages (Cole, 1993), because it excludes the equity and debt securities held by firms and households. Moreover, simply adding total assets of financial institutions involves double counting. Furthermore, financial accounts of some non-bank financial intermediaries are available only for selected years and with much longer time lags as compared with the components of M1 and M2.

The financial ratios are higher in Malaysia than in Indonesia. A large share of TAFI in Indonesia during the past financial repression period was the central bank's assets, because it refinanced most of state-owned banks' credit. The rapid and steady growth of M2 and TAFI since the late 1980s indicates the rapid growth of bank assets following the reforms in 1988 and those of the capital markets in the following years. Within the banking system, the shares of state-owned banks and merchant banks dropped substantially, while the shares of private domestic banks rose dramatically. This will be discussed more thoroughly in the next subsection. Despite the rapid growth of their assets, the role of the non-bank financial institutions

Table 9.2 Indonesia and Malaysia: structure of the financial sectors, 1988 and 1994[a]

	Indonesia				*Malaysia*			
	Number		*Share in assets*		*Number*		*Share in assets*	
	1988	*1994*	*1988*	*1994*	*1987*	*1994*	*1987*	*1994*
Central bank	1	1	36.8	21	1	1	11.8	14.8
Deposit money banks	111	238	56.9	79	38	37	42.1	38.6
State-owned commercial banks	5	5	34.5	30.9	0	0		
Private banks	63	162	13.1	33.6	38	37		
Private forex banks	12	51	8.8	28.9	23	21		
Private non-forex banks	51	111	4.3	4.7	15	16		
Foreign and joint venture banks	11	39	2.8	6.5	16	14[b]		
Development banks	29	29	4.4	6.7	7[c]	7[c]	2.3	1.5
Saving banks	3	3	2.1	1.3	1	1	3.7	2.5

Table 9.2 (continued)

	Indonesia				*Malaysia*			
	Number		*Share in assets*		*Number*		*Share in assets*	
	1988	*1994*	*1988*	*1994*	*1987*	*1994*	*1987*	*1994*
Non-bank financial institutions	13	0	2.7	n.a.	12	12	4.9[d]	5.2[d]
Insurance companies	106	n.a.	1.6	n.a.			20.8[e]	18.8[e]
Leasing/finance companies	83	n.a.	1.5	n.a.	47	40	10.4	11.7
Other credit institutions	5 783	n.a.	0.6	n.a.	2104[f]	n.a.	4.0	6.9
Total			100.0	100.0			100.0	100.0

n.a. = not available.

[a] Except data for 1988 for Malaysia; replaced by data for 1987.
[b] Two foreign banks, namely United Overseas Bank and Security Pacific Asian Bank, sold their Malaysian branch operations to Malaysia Interest in 1994.
[c] Consist of Malaysia Industrial Development Finance (MIDF), Borneo Development Corporation (MDC), Sabah Development Bank (SDB), Sabah Credit Corporation (SCC), Development Bank of Malaysia (DBM), Industrial Bank of Malaysia, and Agricultural Bank.
[d] Include assets of merchant banks, discount houses, and credit guarantee corporations.
[e] Include provident and pension funds.
[f] Cooperatives societies.

Sources: Bank Negara Malaysia (1989); Bank Negara Malaysia (1994); Bank Indonesia, *Indonesian Financial Statistics and Annual Report*, various issues.

in Indonesia is still relatively small and is only beginning to provide a competitive challenge for the banks.

The domination of the financial sector by commercial banks is mirrored in a heavy reliance of business firms' heavy reliance on debt financing in these countries. This has adverse effects at the microeconomic level, because it has led to an unbalanced funding structure among firms in the real sector.

High debt-to-equity ratios present few problems as long as the concerned firms continue to grow. A highly leveraged financial system, however, simultaneously renders enterprises and their banks vulnerable to internal and external shocks. Thus, the rise in interest rates together with major currency realignments (such as in the second half of 1980s and early 1995) meant that heavy reliance on debt strained the cash flows of companies. On the other hand, many of these companies are becoming less profitable because of reductions in economic rents, as levels of protection have been much reduced, reflecting new government policies aimed at economic restructuring.

TAFI, the fourth indicator, focuses on the stock market, which has become an important source for raising funds to finance private investment following the financial sector reforms in Malaysia and Indonesia. The Kuala Lumpur Stock Exchange (KLSE) was separated from the Stock Exchange of Singapore (SES) and established as an independent exchange effective from 1 January 1990. The Jakarta Stock Exchange (JSE) was established in August 1977, and this was followed by the establishment of the Surabaya Stock Exchange (SSE) on 30 March 1989[3] and the Parallel Bourse in the same year. Despite divestment schedules for foreign investment and generous tax incentives to sell shares, the three stock exchanges in Indonesia were relatively undeveloped before 1989. On the supply side, there was no need for domestic companies to raise capital by selling securities in the capital markets, because they could easily get credit with low interest rates and low risks from the state-owned banks. The state-owned enterprises could obtain zero interest capital from the state budget. On the demand side, domestic securities were unattractive, because PT Danareksa set their gross yields at the equivalent to interest rates on one-year time deposits at state-owned commercial banks.[4] As a result, there were only 24 companies (mostly foreign companies to meet the mandated divestment schedules) selling shares and 9 floated bonds (mostly state-owned firms on promotional basis) in these markets in 1988.

There are several factors that made the KLSE much more matured than the JSE. First, government control in both bank credit and the capital market was not seen as distortive in Malaysia like it was in Indonesia.

Table 9.3 Malaysia and Indonesia: financial ratios 1980–90 (percentage of GDP)

	Malaysia				*Indonesia*			
	1980	*1985*	*1990*	*1995*	*1980*	*1985*	*1990*	*1995*
M1	15.0	16.9	21.9	35.1	4.3	7.0	12.2	12.9
M2	42.3	58.7	66.2	103.1	6.7	16.0	43.3	53.5
TAFI						0.3[a]	0.52[a]	0.78[a]
Market capitalisation		52.0	113.7	341.9[b]		0.1	7.6	22.7[b]

[a] TAFI for Indonesia are for the years of 1982, 1988 and 1991.
[b] for the year of 1993.

Sources: ADB (1995) *Asian Development Outlook 1995 and 1996*, Table 3.1, p. 199; IFC (1995); IMF (1995).

Second, privatization of the state-owned enterprises – as a mechanism for domestic savings mobilization for long-term capital investment – was started earlier, and was more advanced, in Malaysia. To reduce the burden of external debt service, these countries have recently used the proceeds from the selling of equity of state-owned enterprises for early repayment of part of their external debts. In Indonesia, foreign investors are permitted to purchase up to 49 per cent of shares in listed companies. Acquisition of 15 per cent or more of the voting power (equity interests) by foreigners in the aggregate of 30 per cent or more of the voting power of a Malaysian company or business requires prior approval from the authorities. In December 1994, there were 478 companies listed in Kuala Lumpur with the ratio of stock market capitalization to DP at 274.54 per cent, as compared with 261 companies and market capitalization at 27.52 per cent of GDP in Indonesia. The size of market capitalization of the KLSE (at $278 billion) ranked it among the 15 largest markets in the world and more than 3.5 times than that of the JSE.

The rise in financial deepening indicates not only positive developments, but also the existence of potential problems. The rising ratios of domestic liquid assets to foreign assets, and the increase in the share of domestic assets held by foreign private investors, have made management of monetary policy more difficult and have increased domestic economies' susceptibility to external shocks. Moreover, deposits at state-owned commercial banks are generally perceived by the public as contingent liabil-

ities of the monetary authorities. As a result, a bank run can easily translate into a currency run when the proportion of short-term liabilities to central bank liquid assets is quite high (Calvo, 1994).

9.3 THE LEADERSHIP AND SEQUENCE OF THE REFORMS

The scope and sequencing of banking policy reforms in the 1980s were much wider and faster in Indonesia than the gradual approach in Malaysia. These differences may be linked to a variety of economic and political environments (including the stage of financial development and policies prior to the reforms) and administrative capacity of individual countries. Prior to the reform, the financial repression, which included direct allocative and pricing controls over financial institutions, was more profound in Indonesia. Like in Indonesia, the authorities in Malaysia administered interest rates, set ceilings on bank credit, and imposed guidelines on credit allocation as instruments to pursue the twin national objectives of the eradication of poverty and the restructuring of society. However, Malaysia has used a less rigid, more general and flexible mechanism than Indonesia.

The 'technocrats'[5] have been the driving force for economy-wide liberalization, including financial sector reform in Indonesia. Having been retired and becoming advisors to the government, the 'technocrats' no longer enjoy the executive power of the government. Nevertheless, they are still listened to by both their successors and foreign lenders. Partly owing to a concern about the difficulty to improve its capabilities to regulate and supervise the banking system and other financial institutions, Bank Indonesia has tended to retain more direct controls over the financial system. The Ministry of Finance is the licensing authority for all financial institutions, and Bank Indonesia is given the tasks of regulating and supervising the banking system. In the case of Malaysia, however, the central bank has been the initiator of the financial liberalization, and the Ministry of Finance has played a supporting role (Cole, 1993).

Economic reform cannot be achieved overnight. It takes some time to improve market infrastructure. In addition, the speeds differ at which different sectors of the economy adjust and respond to the deregulation. This raises questions concerning the efficiency and equity of the adjustment program. Thus, the economic literature poses an important question about the order, or sequence, in which to carry out deregulation. Edwards (1989) and McKinnon (1991) introduced the concept of sequencing. They recommend that, first, financial liberalization should be done after trade and fiscal reforms – the former to align domestic prices with international

prices and the later to curtail budget deficits. Their second recommendation is that liberalization in the capital account should be made only after the liberalization of the domestic financial market.

Indonesia and Malaysia have adopted a reversed sequence of broad-based economic reform. Since its independence from British rule in 1963, Malaysia has maintained relatively relaxed foreign capital control. Deregulation of the capital account in Indonesia was introduced, along with unification of the exchange rate, in April 1970, though both countries have at times imposed capital control for the sake of stability. Under such an open exchange rate system, in both Malaysia and Indonesia, there was no requirement for the surrender of export proceeds, nor taxes on or subsidies for the purchase or sale of foreign exchange. The system is more liberal in Indonesia, however, because foreign nationals and local citizens are free to open accounts in either domestic or foreign currency in the authorized banks, whereas in Malaysia only non-residents are allowed to open foreign currency deposits at local commercial banks and merchant banks. The seven discount houses in Malaysia are allowed to accept interest-earning deposits from the general public, the banks and non-bank financial institutions. The minimum size and tenure of such deposits in foreign currency are however regulated by the Malaysian authorities. The commercial banks in both countries are free to extend credits in foreign currencies.

It is also interesting to note that the initial response of Malaysia to external shocks in the early 1980s was the complete opposite of that of Indonesia. In the early 1980s, Malaysia continued to expand domestic absorption as the government continued to guarantee massive foreign borrowings, mainly from Japan, to finance a heavy industrialization programme including steel, cement, auto and motorcycle plants set up through public enterprise. The federal budget deficit and current account deficit in Malaysia rose from 7.2 per cent of GNP and 1.2 per cent of GNP, respectively, in 1981, to 18 per cent and 14 per cent in 1982. The policy reversal was introduced in 1985, as the government announced various measures of economic stabilization and adjustment. The stabilization programme included a big cut in government investment spending, the adjustment programme measures to consolidate and rationalize the activities of non-financial state-owned enterprises. The privatization policy was announced in 1983 and the Privatization Master Plan issued in 1991.[6]

In contrast, Indonesia immediately adopted a short-run stabilization program in 1983, by cancelling a number of large, capital-intensive investment projects. To raise government revenues, Indonesia reformed its tax system between 1983 and 1985. As in Malaysia, the deregulation pro-

gramme in the real sector of the economy was begun only in 1985. But the privatization of the 180 Indonesian state-owned enterprises has been much slower than the comparable process in Malaysia. Part of the problem is that the government has focused its efforts on public listings on both domestic and international stock exchanges. This method may be more transparent and have promoted wider equity ownership, but most state-owned enterprises cannot meet the stringent listing requirements of financial health and performance.

To prevent the reckless overexpansion of credit, which may result in causing overexpansion of credit, rising inflation, widening current account deficits and banking distress, some economic theoreticians (including Corbo and de Melo, 1987; McKinnon, 1991) have suggested a 'proper' course of banking deregulation. This begins with improving the market infrastructure by tightly monitoring and regulating the commercial banks, by means that include temporary credit rationing. The second step is to recapitalize the existing banks and their clientele. Third, during the transition period, the banking industry is closed temporarily to new entrants both domestic and foreign, mainly because any new entrants would not be burdened with low-yield loans, and could easily out-compete the banks that have existed since the pre-reform period.

Malaysia has taken a gradualistic but steady approach to financial sector reform, more or less in line with such a 'proper' sequence and better co-ordinated with the reforms in other sectors of the economy. Malaysia began liberalization of deposit rates in 1971 by allowing commercial banks to set market-determined interest rates for fixed deposits with maturities of more than four years. In January 1992, the authorities lifted the ceilings on rates of commercial bank deposits with maturities of more than one year. The phasing out of the administered interest rate regime was completed on 23 October 1978, when the commercial banks were allowed to set their deposit and loan interest rates. Prior to the fully fledged liberalization of interest rates, Malaysia has had improved financial market infrastructure and developed money markets.

Banking sector policy reform began in Indonesia in June 1983, when Bank Indonesia reduced the scope of its credit programme and liberalized most deposit and lending interest rates. But instruments of indirect monetary management were introduced in April 1984, a year after the reform. A more drastic reform was introduced in October 1988, but prudential rules and regulations to risk-based capital standard were not introduced until February 1991 (Table 9.4). However, the authorities had to lower the prudential standards because many banks, particularly the state-owned ones, were unable to meet them. Such amendments, corrections, extended

periods of consolidation and retreats make the liberalization programme less transparent and sometimes confusing.

9.4 CONTENTS OF THE REFORMS

The coverage of financial sector policy reforms has been much wider in Indonesia than in Malaysia. The reforms in Indonesia contain measures that affect market competition, interest rates, the allocation of financial instruments, prudential rules and regulations, money markets and the financial market infrastructure (Table 9.4). In contrast, the reforms in Malaysia have been dealt mainly with the deregulation of interest rates, prudential measures and the market infrastructure (Table 9.5). The reforms that allow new entry in offshore banking, charge card businesses and insurance and reinsurance are in line with both countries' commitments to the interim WTO financial services agreement.

Types of Bank and the Scope of Bank Activities

Both Indonesia and Malaysia have adopted the Anglo-Saxon system, limiting commercial banks' activities to operating the payments system and to extending short-term commercial credit. Non-bank financial institutions (NBFIs) and securities markets are assigned to mobilizing and allocating long-term savings. The October 1988 banking reform in Indonesia removed the traditional functional specialization between different banks and major areas of specialization for state-owned banks. Since, the introduction of this reform, there have been only two types of banks operating in the country – commercial banks and rural ones. Also known as a Bank Perkreditan Rakyat (BPR), a rural bank is a unitary local bank that is not allowed to accept demand deposits. The new prudential safeguards, however, retain the portfolio constraints on banks in bonds and equities.

The status of the existing special-purpose institutions such as development, savings and mortgage banks was converted automatically into that of commercial banks. Each of the 12 non-bank financial institutions (merchant and development banks) was given one full year, starting from December 1991, to make the adjustment to be either a security company or a commercial bank. Each existing 'secondary bank' was given the option either to convert its status into a BPR or else to cease operation. Immediately, the secondary banks all converted into BPRs and all of the NBFIs opted, between January and March 1993, to become fully fledged joint venture commercial banks.

Table 9.4 Indonesia: reform in the banking industry, 1983–95

Policy measures	*Before reform*	*After reform*	*Date*
I. Competitive measures			
(1) Entry of new banks			
(a) Private banks	Moratorium since 1970	Permitted	October 1988
(b) Foreign banks	Moratorium since 1970	Permitted to enter as joint venture	October 1988
(2) Branching power			
(a) Private banks	Restricted[a]	Permitted to sound banks	October 1988
(b) Foreign banks	Restricted to Jakarta	Permitted to seven cities (later Batam)	October 1988
(3) Foreign exchange licence	Restricted[a]	Eligible for sound banks	October 1988
(4) Types of loans			
(a) State banks	Mainly the extended subsidized credit programs, as set and refinanced by Bank Indonesia	The scope and coverage of the subsidized credit Programs reduced	June 1983 27 January 1990
(b) Private banks	Free to set	20% total credit must be extended to small business[b]	October 1988
(c) Foreign banks	Free to set	50% total credit must be extended to export-related activities	October 1988
(5) Types of saving and deposit schemes			
(a) State banks	Set by Bank Indonesia	Free to set	1 June 1983
(b) Private banks	Free to set	Free to set	
(c) Foreign banks	Free to set	Free to set	
(6) Deposits of the public sector	Restricted to state banks	Restricted to state banks	October 1988
(7) Deposits of the state enterprises	Restricted to state banks	Up to 50% with private banks	October 1988
(8) Deposit rates			
(a) State banks	Set by Bank Indonesia	Free to set	1 June 1983
(b) Private banks	Free to set	Free to set	
(c) Foreign banks	Free to set	Free to set	
(9) Loan rates			
(a) State banks	Controlled by Bank Indonesia	Free to set	1 June 1983
(b) Private banks	Free to set	Free to set	
(c) Foreign banks	Free to set	Free to set	
(10) Credit ceilings			
(a) State banks	Set by Bank Indonesia	Eliminated	1 June 1983
(b) Private banks	Set by Bank Indonesia	Eliminated	1 June 1983
(c) Foreign banks	Set by Bank Indonesia	Eliminated	1 June 1983

Table 9.4 *(continued)*

Policy measures	*Before reform*	*After reform*	*Date*
(11) Foreign exchange power (limited to licensed banks)	Subjected to ceilings set by Bank Indonesia	Net open position[c]	November 1989
(12) Reserve requirements	15% of deposits (differentiated between banks)	2% of deposits	October 1988
(13) Entry to new activities			December 1988[d]
(a) Leasing	Not regulated	Subsidiary	
(b) Venture capital	Not regulated	Subsidiary	
(c) Securities trading	Not regulated	Not for own account, not as broker/dealer	
(d) Factoring	Not regulated	Directly	
(e) Consumer finance	Not regulated	Directly	
(f) Credit cards	Not regulated	Directly	
(g) Underwriting shares[e]	—	Prohibited	
(h) Custodian	Not regulated	Approval required for capital market	Otherwise can do as part of
(i) Trustee and guarantor	Not regulated	Approval required for capital market	usual activities
(j) Securities administrative agency	Not regulated	Prohibited	
(k) Investment manager	Not regulated	Subsidiaries	
II. Prudential measures			
(1) Capital Requirements			
(a) General banks			
(i) Private banks	—	Rp 10 billion	October 1988
		Rp 50 billion	October 1992
(ii) Joint venture banks	—	Rp 50 billion	October 1988
(minimum 15% Indonesian ownership)		Rp 100 billion	October 1992
(b) Bank Perkreditan Rakyat		Rp 50 million	October 1988
(2) Legal lending limits	None	(1) Old credit: (% of bank capital)	29 May 1993
		Individual Group	
		20% 50%	By 29 May 1993
		20% 50%	By December 1995
		20% 50%	By March 1997
		(2) New credit 20% for individual and 20% for group	
(3) Loan to deposit ratio	None	110%	February 1991[b]

Table 9.4 *(continued)*

Policy measures	*Before reform*	*After reform*	*Date*
(4) Capital adequacy ratio	None	(% of risk-weighted assets) 5% by March 1992 7% by March 1993 8% by Dec. 1993[g]	February 1991
(5) Net open position	None	25% of capital	March, 1989
(6) Accounting standard	None		1 January 1993
III. Money market Reintroduced in February 1984, SBI is the most important money market instrument at present. On 1 June 1993 the auction system of SBI changed from 'cut-off rate' (COR) to 'stop-out rate' (SOR). The private sector commercial paper (SBPU) introduced in January 1985. Until now, the government has not floated treasury bonds in domestic market.			
IV. Transparency and accountability of reporting and management			
(1) To improve banking supervision by (a) standardizing accounting and reporting system; (b) requiring commercial bank to submit detailed business plans to the central bank and banning person involved in fraudulent transactions or defaulted on significant loans from becoming shareholders, executives or member of the board of commissioners of banks.			January 1995
(2) Banks are required to (a) submit detailed credit plan to Bank Indonesia and those with uncollectible amounted to 7.5% of total credit or more are required to submit credit recovery plans; (b) standardize internal audit system and (c) adopt information system technology.			March, 1995

[a] Permitted in principle, but economic and social requirements made it prohibited in practice.
[b] Since 29 May, can be channelled through other banks and BPRs.
[c] Overseas borrowing for public sector is subject to ceilings set by TKPLLN (Coordinating Team for Management of Commercial Offshore Loans) since October 1991.
[d] Items (g) to (j) are subject to Ministry of Finance's Decision no. 1548 of 4 December 1990.
[e] Can underwrite bonds and other debt instruments.
[f] Since 29 May 1993 own capital; included in the denominator.
[g] In 29 May 1993 this schedule was extended to December 1994.

Sources: Packages of government regulations (circulars and announcements): Pakto 1988, Pakmar 1988, Pakjan 1990, Pakfeb 1991, Banking Law Number 7, 1992; Banking Regulation, May 29, 1993; Nasution (1983); Cole and Slade (1991).

In contrast, Malaysia retains various types of specialized financial institutions, which include the Industrial Development Bank of Malaysia Berhad (IDBM), the Agricultural Bank of Malaysia (ABM), the Development Bank of Malaysia (DBM) and the Sabah Development Bank. In addition, there are a number of public development statutory agencies that extend finance to individuals and enterprises for investment in commerce, agriculture and industry. These agencies include the Council of Trust for Indigenous People (MARA), the Federal Land Development Authority (FELDA), the Rubber Industry Smallholders' Development Authority (RISDA), various state development corporations, and a number

Table 9.5 Malaysia: reform in the banking industry, 1987–95

Policy measures	*Before reform*	*After reform*	*Date*
I. *Competitive measures*			
(1) Entry of new banks			
(a) Commercial banks			
(i) Domestic banks	Permitted	Permitted	1 October 1989
(ii) Foreign banks	Permitted	By the Banking Act 1973 and the Banking and Financial Institution Act 1969 (BAFIA) the 16 foreign banks were required to be locally incorporated by September 1994	
(b) Specialized banks			
(i) Development banks	Restricted	Restricted	
(ii) Agriculture banks	Restricted	Restricted	
(iii) Industrial banks	Restricted	Restricted	
(iv) Islamic banks	Permitted	Regulated by Islamic Banking Act of 1983	March 1983
(2) Branching power			
(a) Private banks	Permitted to sound banks	Permitted to sound banks	
(b) Foreign banks	Not allowed	Not allowed	1966
(3) Foreign exchange licence	Eligible for sound banks	7 banks are granted to operate in tier I to accept deposit and give loans in foreign currencies	1 December 94
(4) Types of loans			
(a) Special purpose banks	Mainly extended subsidized Credit programs to specific target groups, as set and refinanced by Bank Negara Malaysia		
(b) Commercial banks	Subject to lending guidelines as set and periodically revised by Bank Negara Malaysia		October 1976
(5) Deposits of the public sector	Preferably to certain banks, such as Bank Bumi Putra and Malaysian Banking Bhd..	Preferably to certain banks, such as Bank Bumi Putra and Malaysian Banking Bhd.	
(6) Deposits of the state enterprises			
(7) Foreign exchange power		Net open position	17 January 1994

Table 9.5 *(continued)*

Policy measures	*Before reform*	*After reform*	*Date*
(8) Reserve Requirements			
(a) Standard	$8\frac{1}{2}\%$	Increased three times to $11\frac{1}{2}\%$ since 1 July 1994	Between January and July 1994
(b) Placement of the ringgit funds of foreign banks in non-interest bearing vostro account at Bank Negara Malaysia	Not required	Required	2 February 1994
(9) Deposit rates	Set by Bank Negara Malaysia	Free to set	23 October 1978
(10) Loan rates	Set by Bank Negara Malaysia	Free to set	23 October 1978
(11) Entry to New Activities		01 October 1994	
(a) Leasing	Subsidiary	Subsidiary	
(b) Venture Capital	Subsidiary	Subsidiary	
(c) Securities Trading	Subsidiary	Regulated	
(d) Factoring	Directly	Directly	
(e) Consumer Finance	Directly	Directly	
(f) Credit Cards	Directly	Directly	
(g) Underwriting shares	Prohibited	Prohibited	Can underwrite bond and other debt instruments
(h) Custodian (i) Trustee and Guarantor	Approval required for capital market, otherwise can do as part of usual activities	no change	
(j) Securities Adm. Agency	Prohibited	Prohibited	
(k) Investment Manager	Subsidiary	subsidiary	
II. *Prudential measures*			
(1) Capital Requirements			
(a) Domestic banks	M$2 million	M$10 million	January 1981
(b) Foreign banks	M$5 million	M$10 million	
(2) Legal lending limits	Yes	Yes	
(3) Loan to deposit ratio	Yes	Yes	
(4) Capital adequacy ratio		8% by 1987	

Sources: Bank Negara Malaysia (1989); Bank Negara Malaysia (1994); Sheng (1996).

of development authorities. They are funded mainly by the federal government's development budget.

Market Entry

The October 1988 banking reform in Indonesia has significantly strengthened market competition. It has achieved this by relaxing restrictions on market entry, and by removing a 1967 regulation that gave state-owned banks special access to public sector funds. Since this banking reform, any state-owned enterprise has been allowed to hold up to 50 per cent of its deposits at private banks. The issuing of new bank licences, stopped in the early 1970s, was resumed, and new licences given to both domestic and foreign institutions. The reform also rationalized and relaxed the requirements for obtaining licences to operate in foreign exchange transactions and to open new branches. Whereas the national banks can open branch offices anywhere in the country, the foreign and joint venture banks were limited to opening one sub-branch each in the eight major cities.

Foreign banks can penetrate the Indonesian domestic market only through joint ventures with local banks. The foreign partners must already have representative offices in Jakarta, be reputable in their country of origin and be from countries that have reciprocal agreements with Indonesia. Domestic partners must be classified as 'sound' for at least 20 of the last 24 months. Although there is no regulation concerning establishment of new branches by foreign banks in Indonesia, no new licence has been issued. The maximum share of foreign partners in a joint venture bank is set at 85 per cent.

Table 9.6 indicates that the Herfindahl indexes of total deposits, loans and assets by bank ownership have been reduced sharply following the financial sector reform in Indonesia. A rapid drop – since 1988 – in all indexes for all banks indicates an erosion in the market power of the state-owned banks (including Bank Indonesia). This, however, was accompanied by the increasing market power of certain dominant private banks, some of which are technologically more advanced than the bureaucratic state-owned banks.

The index for the foreign banks group has not changed significantly since the reforms. Among foreign banks the Jakarta branch of the Bank of Tokyo may be the most affected; before the 1988 banking reform, it was the only Japanese bank that had fully fledged branches operating in Indonesia. As a result, it had a monopoly right to channel the lucrative Japanese foreign aid and loans to Indonesia and to handle financial transactions of all Japanese companies operating in the country.

Table 9.6 Indonesia: Herfindahl index of banking industries, 1981–91[a]

	All banks[b]			*Private banks*			*Foreign banks*			*Regional development banks*[c]		
	Total deposits	*Loans*	*Assets*	*Total deposits*	*Loans*	*Assets*	*Total deposits*	*Loans*	*Assets*	*Total deposits*	*Loans*	*Assets*
1981	0.145	0.157	0.151	0.092	0.064	0.078	0.111	0.117	0.122			
1982	0.122	0.157	0.144	0.084	0.061	0.077	0.124	0.150	0.138			
1983	0.110	0.148	0.141	0.080	0.063	0.076	0.133	0.116	0.121			
1984	0.107	0.144	0.142	0.072	0.066	0.070	0.127	0.112	0.134			
1985	0.107	0.139	0.142	0.069	0.066	0.070	0.109	0.107	0.130			
1986	0.112	0.142	0.146	0.069	0.066	0.075	0.107	0.115	0.133	0.081	0.071	0.073
1987	0.103	0.132	0.131	0.067	0.066	0.072	0.124	0.129	0.120	0.078	0.074	0.073
1988	0.102	0.125	0.123	0.066	0.064	0.072	0.124	0.129	0.128	0.080	0.075	0.078
1989	0.088	0.110	0.105	0.077	0.068	0.072	0.143	0.141	0.137	0.083	0.095	0.080
1990	0.084	0.094	0.097	0.089	0.069	0.082	0.145	0.140	0.136	0.092	0.079	0.089
1991	0.074	0.084	0.083	0.096	0.091	0.087	0.133	0.117	0.120	0.089	0.080	0.097

[a] The Herfindahl index (HI) is the sum of quadratic market share of each bank in the sample: $\sum_{i}^{n}(X_i/m)^2\ i = 1 \ldots n$ where X_i is the size of the i-th firm, n is the total number of banks in the sample and M is the total size of the sample banks. The Herfindahl index takes a value between zero and unity. HI equals unity corresponds to perfect concentration or monopoly and a value of zero coresponds to the perfect competition.

[b] From 1981 to 1990, there were 41 banks (5 state banks, 11 foreign banks and 25 private banks) included in the sample. In 1991, there were 42 banks (6 state banks, 11 foreign banks and 25 private banks).

[c] Regional development banks (1986–91) consisted of 27 banks.

Source: Perbanas, *Berita Perbanas*, various editions.

In contrast, Malaysia still protects its domestic banks from foreign competition, and gives special market preference to state-controlled banks. Of the 37 commercial banks operating in Malaysia in December 1994, 23 were domestic banks (with 749 branches) and the remaining 14 were foreign-incorporated banks (with 146 branch offices). To protect domestic banks, since 1966 the authorities have issued no new licences to foreign banks for establishing branch offices.

The 5 largest banks accounted for 53 per cent of total bank resources, 55 per cent of total bank deposits and 50 per cent of total bank loans. Special access to public funds is given to 2 leading government-controlled commercial banks, namely Bank Bumi Putra Malaysia Berhad and Malayan Banking Berhad. These 2 banks have 310 branch offices, or 31 per cent of the country's total of 995 bank branches. They also own 45 per cent of total assets of the domestically incorporated commercial banks, or 33.7 per cent of the total assets of all commercial banks in Malaysia (Table 9.7).

Prudential Rules and Regulations

Malaysia had managed to improve its prudential supervision and to develop monetary instruments prior to the liberalization of interest rates and credit policy in 1987. These, along with the contractionary demand measures (including restrictive monetary policy), have countered the expansionary impacts of the economic reform to help maintain short-term internal and external balances in the country. To have equal footing, effective from April 1988, pension funds and insurance companies in Malaysia are supervised by the Malaysian central bank. In Indonesia, such financial institutions are regulated and supervised by the relatively weak insurance commissioners of the Ministry of Finance.

Indonesia also has a much weaker legal and accounting system. Major laws on corporations, bankruptcy and the enforcement of contracts are obsolete and were inherited from the colonial era. A special accounting system for banks was introduced in January 1995. The long period of financial repression has eroded the central bank's capacity to regulate and supervise the banking system. It has also made the state-owned banks more bureaucratic and decreased their ability to select borrowers, administer credit and monitor how it is used, and recover matured loans. The problems have been exacerbated because the central bank and the state-owned banks are prone to political pressures.

Until recently, bank supervision in Indonesia was focused very much on regulatory functions. Relatively little work was carried out on quantitative

Table 9.7 Malaysia: concentration in the commercial banks, 1980–9

	1980	*1985*	*1989*
Share of 5 largest banks in commercial banks' total assets (%)[a]	57.1	50.2	54.0
Herfindahl concentration index	0.076	0.061	0.077

[a] The five largest commercial banks and years of their establishments or commencement of their businesses in Malaysia are: Bank Bumiputra Malaysia Bhd. (1966), Malaysian Banking, Bhd. (1960), United Malaysian Banking Corporation, Bhd. (1960), United Overseas Bank Ltd (1966) and Public Bank, Bhd. (1966).

Sources: Yan and Fan (1995) Table 5.13; (1995); Bank Negara Malaysia (1989).

risk analysis or on in-depth risk appraisal of individual institutions. Thus, when the risk positions of the banks increased following the liberalization, there was neither clear warning nor restraining action forthcoming from the supervisory authority. Similarly, Bank Indonesia failed to anticipate the consequences of credit expansion following the reform. The recent collapse or near-collapse of a number of domestic private banks such as Bank Duta in 1990, Bank Summa in 1992 and Bank Yama and Bank Pacific in 1995, and of the state-owned development bank Bapindo in 1993, illustrate the need to improve implementation of the new prudential standard. The new rules and regulations were introduced in February 1991. However, Bank Indonesia relaxed these rules in May 1993 because the banks were having difficulty in meeting the schedule of the prudential standard.

To strengthen implementation of the prudential supervision, Bank Indonesia has expanded the organization of its bank supervision from one department to three. The supervisory responsibilities of Bank Indonesia have also been substantially broadened to cover the BPRs and finance companies. Until February 1990, the BPRs were supervised by Bank Rakyat Indonesia, the state-owned agricultural bank, merchant banks by the Ministry of Finance. The Ministry of Finance also continued to supervise the leasing, factoring, and consumer financing activities of finance companies until December 1995.

The shift of prudential measures from the system of reserve requirement ratio to the risk-based capital standard in Malaysia was started in September 1981, with the introduction of a minimum capital adequacy ratio (CAR). The capital of the commercial banks was further

strengthened by the authorities raising their minimum capital funds in February 1982. Effectively from January 1981, domestic banks have been mandated to each maintain a minimum capital fund of M$10 million (as compared to M$2 million previously), the equivalent of $3.8 million at the exchange rate of M$2.6 per $1 in 1981, and the minimum capital fund for foreign banks was raised from M$5 million to M$10 million. In the beginning, the CAR was defined as the ratio of 'free' capital, that is shareholders' funds, less investment in long-term assets to total assets. The ratios were set at 4 per cent for domestic banks and 6 per cent for foreign banks. A comprehensive revision of the capital adequacy ratio at 8 per cent, along the BIS recommendation, has been fully implemented since 1987.

The banking reform in Indonesia raises the required minimum capital for newly established banks and, although it has eliminated geographical discrimination it discriminates between domestic and joint venture institutions. In October 1992, the minimum required capital for newly established domestic and joint venture banks were doubled respectively to Rp50 billion and Rp100 billion (less than $25 million and $50 million, at the prevailing exchange rate of Rp2285 per $1). The risk-based prudential rules and regulations automatically require that each bank raises its capital base in line with the size and the quality of its assets. Thus, to strengthen their capital base, 22 private domestic banks raised funds by selling equities on the Jakarta Stock Exchange from October 1995 onwards.

The statutory reserve requirement ratio and minimum liquidity ratio have been actively used in Malaysia for achieving three objectives: first, as a prudential function, second, as an instrument for affecting the capacity of deposit money banks to generate loans (demand deposits) and hence money supply, and third, to help finance deficit of the public sector at large. Aside from paying inflationary tax for holding a non-yielding reserve requirement, the commercial banks are also required to absorb government securities, treasury bills and bonds issued by state-owned enterprises such as Cagamas, and the national housing mortgage corporation. Between May 1989 and 1994, Malaysia raised the reserve requirement ratio eight times, from 4.5 per cent to 11.5 per cent. In response to destabilizing capital inflows, in January 1994 Bank Negara Malaysia extended its application to include foreign currency deposits and transactions (such as foreign currency borrowings from foreign banks and inter bank borrowings). Prior to this, it had only applied to ringgit-denominated transactions (IMF, 1995: Box 1.4).

On the other hand, the money multiplier increased substantially as Indonesia reduced the reserve ratio from 15 per cent to 2 per cent in October 1988. Although it is still binding, the role of the reserve require-

ment is less important as a tool of monetary policy under the CAR system as long as the banks are under-capitalized. Under such a system, a bank with insufficient capital is required to shrink the size of its portfolio and/or to place greater emphasis on those assets with a low risk weight.

Credit System

Although the policy reforms have reduced distortions in the credit market, the credit policy remains segmented and pro-cyclical in both countries. This is because banks are still mandated to channel certain portions of their credit to specific economic sectors (such as agriculture) and specific classes of customers (such as small-scale enterprises and indigenous entrepreneurs in the case of Malaysia). Nevertheless, interest rates charged in these special credit programmes are now much closer to market rates and their insurance is voluntary, with market-based premia.

Four credit regulations were introduced between 1989 and 1990 in Indonesia.[7] The first is implied in the legal lending limits regulations (LLR). It sets limits on the aggregate amount of loans and advances (except credit programmes financed by Bank Indonesia's liquidity credit) to any insiders, whether they are single borrowers (persons or firms) or groups of borrowers. The second rule requires new joint venture banks and branches of foreign banks outside Jakarta to allocate at least 50 per cent of their loan portfolios to export-related activities. The third rule mandates domestic private and state-owned banks to allocate at least 20 per cent of their loan portfolios to small-scale enterprises and cooperatives (*Kredit Usaha Kecil*, or KUK). The fourth rule was introduced in January 1990, when Bank Indonesia narrowed the scope of the subsidized credit programme further to four areas, which include rice production, marketing, buffer stock and investment financing in the eastern part of the country.[8]

The objective of LLR and credit allocation is to democratize access to bank credits in order to inhibit concentration of financial power, protect the interests of uninformed depositors, and prevent misuse of funds by insiders. This is because, like in other Asian countries, through networks of ownership, business and management interlocking, most of the business conglomerates in Indonesia and Malaysia are affiliated with banks. As predicted by Stiglitz (1994), the LLR rules are difficult and costly to monitor and enforce, particularly in a country with weak legal and accounting systems, like Indonesia. To circumvent these rules, bank owners swap loans among themselves and industrial conglomerates use their banking units to give favourable treatment to their suppliers and customers.

Malaysia sets a single customer limit at 30 per cent of any bank's shareholders' funds, or net working funds in the case of a foreign bank, and an overall limit for large loans at 50 per cent of the total credit facilities. A large loan is defined as any loan that in the aggregate exceeds 15 per cent of capital funds. In addition, Bank Negara Malaysia issues lending guidelines that require commercial banks to channel certain percentages of their credit to certain classes of customers (such as indigenous community and small-scale enterprises) and to specific economic sectors (such as agriculture, manufacturing industry and residential housing). Both the definitions of beneficiaries and the percentage allocations of the credit are changing over time in line with changes in government policy. The 1994 Lending Guidelines issued on 31 March 1994, for example, require commercial banks to extend at least 20 per cent of total loans outstanding to the Bumiputra community and to purchase low-cost housing units. Established in 1993, the Credit Guarantee Corporation of Malaysia provides guarantee cover to commercial banks for loans extended to small-scale enterprises (including the hawkers and petty traders). Bank Negara Malaysia also provides refinancing facilities for export credit, and credit for the promotion of investment in primary food production and distribution.

Foreign Exchange Exposure

As noted earlier, both Malaysia and Indonesia adopt a liberal, open foreign exchange system with a unified exchange rate. However, commercial banks in these two countries require a special permit to deal in foreign exchange transactions, which are issued only to well-managed banks of strong financial standing. In addition, both countries try to influence the size and structure of short-term capital inflows through a number of quantitative and qualitative restrictions. The restrictions are aimed directly at limiting the size of external borrowings and/or at raising their effective costs. At present, there are four instruments being employed to influence the size and structure of capital flows into Indonesia. The first is a daily net open position (NOP), the rate of which can be varied according to the government's monetary policy; on 25 March 1989, this system replaced the set of complex ceilings on foreign borrowings of banks. The second instrument is the non-trade-related exchange rate swap facility at Bank Indonesia. Established in January 1979 to attract foreign investment, the swap facility offers a special exchange rate to domestic borrowers by providing explicit subsidy on the exchange rate. Under this facility, Bank Indonesia provided forward cover to foreign-currency liability. The swap

premium was set below the level of the realized depreciation of the rupiah. The size of the subsidy also depended on the interest rates chosen to calculate interest rate differential. In reality, the swap facility was also used by the financial institutions either to fund themselves or to hedge or even speculate against a declining rupiah. The third instrument is the system of ceilings on offshore borrowings of state-related sectors, including those in the private sector that rely on public entities for their bankability. The last instrument is incorporated in the Income Tax Law of October 1994, made effective from 1 January 1995. It imposes a 0.1 per cent tax on the sale of shares and other certificates in stock market transactions (founder shareholders of listed companies are subject to an additional 5 per cent tax).

Malaysia mainly uses six instruments for limiting and raising costs of the short-term capital inflows. These measures include: (1) imposing limits on non-trade-related swap transactions of the banks; (2) imposing ceilings on banks' non-trade- and non-investment-related external liabilities; (3) requiring banks (from January to May 1994) to place with Bank Negara, interest-free, the ringgit funds of foreign banking institutions, which are referred to as Vostro accounts; (4) raising the statutory reserve requirement (SRR) ratio; (5) the prohibition of domestic residents from selling short-term money market instruments to foreigners; and (6) banning commercial banks from undertaking non-trade swap and outright forward transactions on the bid side with foreign customers. As has been pointed out earlier, the Vostro accounts were also considered part of the eligible liabilities base for the calculation of required reserves. In early 1994 alone, the SRR was raised three times by a cumulative 3 percentage points to 11.5 per cent in order to siphon off the increase of liquidity from the capital inflows. This penalised all banks, because it raised their cost of funds.

Quantitative restrictions or capital controls are perceived as inferior to a tax on foreign borrowings, which is regarded as the first best policy. In the short run, they are seen as made to measure devices to bring about reduction of capital inflows quickly without having to lower interest rates. In the longer run, however, the quantitative controls on capital movements have several major disadvantages. As they are inevitably involved with non-price rationing, they result in very different effective rates of tax on different domestic borrowers. They are also cumbersome to administer, and there is some potential policy rigidity or pressure group activity that ensures that restrictions, once imposed, are not eased or removed after the macroeconomic reasons for their introduction have been resolved. Because of such macroeconomic crisis-protection ratchet effects, the capital controls are subject to abuse and to dissipation because of

inducements to rent-seeking, as allocations through quantitative controls inevitably involve non-price rationing.

The principal, less distorting alternative policy that may help reduce the motivation to shift capital around is the so-called 'Tobin tax' (Tobin, 1989; Eichengreen *et al.*, 1995), that is, a tax on financial transactions that involve a currency exchange. This includes a non-remunerated reserve requirement deposit at the central bank on deposits associated with direct borrowing in foreign currency. The tax should be a insignificant burden on exchanges in the goods and services market, on the labour market and on long-term capital investment. However, it would add significantly to the cost of short-term arbitrage to reduce speculative transactions. Such a tax increases government revenue, and reduces both speculative transactions and exchange rate volatility. The feasibility of collecting such a tax, however, depends on the existence of an international agreement to cooperate in imposing it. As of now, tax on short-term capital inflows is not covered in double-taxation treaties between nations. A high tax may act as a disincentive to borrow overseas, particularly on short-term maturities. Moreover, the high tax can be avoided or rerouted through other channels. These channels include over-invoicing of imports or under-invoicing of exports when export credits are exempted from the tax. In addition, a tax measure is a long-term solution, while excessive capital inflows are a temporary phenomenon only. As a result, it would be difficult to readjust the tax ratio once short-run capital inflows return to a more manageable level.

9.5 DISTRESS OF THE BANKING INDUSTRY

The transition process to the new competitive environment with stricter rules and regulations has been more difficult for the banking system in Indonesia, particularly for the state-owned banks. Unused to competition, these banks were concerned mainly with targets, and they were less concerned about developing new instruments, improving services, credit analysis and profitability. Recovery efforts were weak owing to problems, of moral hazard because most of the risks of the credit programmes were assumed by the state-owned credit insurance companies, by the central bank or by the Ministry of Finance. Recovery specialists are lacking, because this division was perceived as career-dead for state bank employees. Such internal problems for the commercial banks are less severe in Malaysia, because they are encouraged to compete in serving the target groups. Moreover, the financial repression was less damaging in Malaysia,

because the system of credit ceilings was more general and the interest rates were closer to market rates.

The insolvency of financial institutions in Malaysia and Indonesia was brought about by a combination of the world-wide economic recession, which led to falling commodity prices in the first half the 1980s, with other factors. Many of the banks' corporate clients were highly geared, and their values of loan security were found to be no longer adequate after the drastic fall in prices of pledged assets. Much of these were in the form of land, property and shares in investment projects, which became less profitable because of economic reforms. The financial crisis broke in Malaysia in 1985. It started with the failure of the Overseas Trust Bank (OTB) in Hong Kong in July followed by the failures of a small leasing company (Setia Timor credit and leasing) in September and of twenty-four deposit-taking cooperatives (DTCs). The failure of Pan-Electric, a large, public-listed company in Singapore, had led to the closure for three days of the Kuala Lumpur and Singapore Stock Exchange. The failure was triggered by a run on a medium-size finance companies associated with a businessman with interests in Pan-Electric. Three other commercial banks (United Asia, Bank Perwira Habib and Sabah Bank) failed in 1986.

The number of bank crises that have led to closure, merger, take-over or the provision of large-scale assistance by the public sector is higher in Indonesia than in Malaysia. The much-publicized bank crises in Indonesia started with the failure of PT Bank Duta in September 1990, followed by the bankruptcy of PT Bank Summa in 1992, and the case of outright corruption at PT Bapindo, the state-owned development bank, in 1993. In 1995 Bank BNI, the healthiest state commercial bank, was assigned to take over two private banks, PT Bank Pacific and Bank Yama. Despite relatively high economic growth of over 6 per cent a year since 1990, problem loans by Indonesian banks appear not to have diminished significantly, though a combination of factors has made financial reports unreliable and it is difficult to estimate the exact size of the problem loans in the country. The first factor is the weak legal and accounting system. In addition, there was a practice of refinancing the problem loans to make them 'evergreen'. In February 1994, problem loans were estimated at $7.5 billion in the seven state-owned banks and $5.8 billion at private banks. The total sour loans – at $13.3 billion – were equivalent to 16 per cent of the total credit of all commercial banks. Assuming the recovery rate to be 30 per cent, the potential loss for the state-owned banks amounts to $5.25 billion, representing more than 2.5 times their entire paid-in capital, or 15 per cent of the government budget for fiscal year 1993/1994, or 4 per cent of GDP.

The bad debts need to be recovered, because they are financially parasitic, eating up capital and growing faster on capitalized interest rate that the banks will never see. The large-scale problem loans of domestic banks are concentrated in some 300 firms, particularly among the 50 politically well-connected business conglomerates. Land is the main collateral of banks' credit in Indonesia. As a result, the health of the banking system has depended on the ability and willingness of the conglomerates to repay their matured loans, on legal status and on land prices. Driven by easy bank credit following the October 1988 banking reform, land prices had risen significantly. The high capital gain from owning property, which was higher than the lending rates, attracted new investors and drove prices of land higher still. This is characteristic of a bubble process. The peak was reached in 1992, and since then land prices have lost most of their gains from the rise during the bubble period. Many real estate companies and developers, who had borrowed to acquire assets, have become insolvent. Many of these companies belong to major business conglomerates, which use their banking units to finance their speculative real estate business. This was exactly what happened to Bank Summa in 1992[9] and Bank Pacific in 1996.

Recapitalization is the costliest of the financial sector reform. As required, capital is proportionally linked to both the size and the quality of assets, and the banks' need to raise capital has been rising with the increase in the size of their total assets and problem loans. The problem has become more difficult because banks in Indonesia have traditionally depended on the central bank's refinancing facilities, and non-bank companies have relied heavily on debt financing at subsidized interest rates. Such a high debt-to-equity ratio represents few problems as long as the firms continue to grow and real interest rates remain very low or negative. However, a high-leveraged financial system exposes enterprises and banks to external and internal shocks, such as the rise in interest rates and reduction in economic rents that are happening in the process of economic liberalization. In particular, state-owned banks are undercapitalized, but inherited a much larger proportion of low-yield but high-risk programme loans.

Neither Malaysia nor Indonesia has any type of security funds such as deposit insurance for paying depositors' claims in cases of bank insolvency. In principle, owners and management of the banks are responsible for strengthening the capital base and solving the problem loans of their banks. However, when they cannot solve the problems themselves, the central banks usually step in. This is because central banks in both countries have traditionally a wide range of responsibilities to forestall system-

atic risk that might jeopardize public confidence in the banking system. The central bank may advise the problem banks to undergo a merger, consolidation or take-over by new investors, or provide them with fresh capital injections.

Bank Indonesia exercises its role as lender of last resort for upholding systemic stability in the financial markets on a case-by-case basis. Neither the size nor the terms of the liquidity and capital support programmes for rescuing the problem financial institutions have ever been made transparent to the general public. When PT Bank Duta collapsed in September 1990, owing to losses from foreign exchange speculation, it immediately received a capital injection of $419 million from the 'friends' of the three social foundations (all chaired by President Suharto), who are also the major shareholders of the bank. Of the insolvent banks, only PT Bank Summa was allowed to go bankrupt in 1992.

Bank Indonesia provides support programmes to insolvent domestic private banks on an *adhoc* and non-transparent basis. The supports include capital injections and other emergency financial supports, and they are made available to banks owned by those who are politically well connected. To strengthen their primary (tier I) capital, Bank Indonesia acquires shares of the problem banks and provides them with other types of equity capital. The central bank also provides loans, guarantees and other types of support to strengthen liquidity of the financially distressed banks. Aside from providing credit and buying equity shares, Bank Indonesia also arranges the merger, consolidation and take over of the problem banks either by stronger institutions or by new investors. As shown by the case of PT Bank Pacific, providing access to lender-of-last resort funding for the distressed banks on a continuous basis often committed Bank Indonesia to lend money to institutions that had no capital. Owners had no incentive to use the new money wisely, because they had nothing at risk. On 31 July 1995, Bank Pacific had Rp1 trillion sour loans, or about 40 per cent of its total assets, used mainly for financing car loans and real estate projects. To rescue Bank Pacific, Bank Indonesia had asked Bank BNI to inject fresh loans to it which were rediscounted at the central bank. The bank was originally fully owned by the family of General Ibnu Sutowo. When Bank Pacific collapsed in the early 1980s, Bank Indonesia rescued it by taking over 38.25 per cent of its equity share.

At present, the government has no resources to strengthen the capital base of its banks. On the other hand, the high non-performing loans have been largely responsible for the weakening of the net interest income of the state-owned banks. The interest income is, however, further squeezed by the rising interest rate on deposits. The severe market competition on

both sides of their balance sheet makes it difficult for banks to raise the spread between lending and deposit rates as a way to pass at least some losses to prime customers. Meanwhile, only Bank Tabungan Negara and Bank BNI have met the criteria for raising equity capital in domestic capital markets.

The government of Indonesia has opted for various mechanisms to strengthen the capital base of the state-owned banks. The first was by borrowing the sum of $307 million as a Financial Sector Development Project loan from the World Bank on 12 November 1994;[10] In addition, state-owned (and domestic private) banks borrow long-term floating-rate notes from international capital markets that can be regarded as capital. The second means was to either convert some of the outstanding Bank Indonesia refinancing facility into the capital of these banks or to provide them with new credit lines. The third method was for the Treasury to take over part of the bad debts. The fourth was by shifting part of these banks' sour loans to state-owned insurance companies, such as PT Askrindo, PT Asei, and Perum PKK.[11] The fifth was to relax prudential standards by, among things, modifying the definition of capital and weights to calculate banks' portfolios, as shown by the revised prudential rules and regulations issued in May 1993. The sixth was to encourage, on a limited basis, the securitization of the non-performing assets. This included absorption of some of the problem loans at state-owned banks by state-owned enterprises or government ministries, as in the case of the huge loan losses of the state development bank Bapindo in dealing with the Golden Key Group.[12]

The way Bank Negara Malaysia, between 1988 and 1994, rescued the four insolvent commercial banks and 24 DTCs was by means of transparent mechanisms. The operation to rescue the DTCs was divided into four schemes involving over 685 000 depositors with about RM3.4 billion in outstanding deposits. The central bank made available a total of RM1.1 billion in soft loans at 1 per cent annual interest rate and RM280 million in commercial loans at 4 per cent per annum to the programme. Various solutions to the distressed DTCs have been tried thus they have been: de-registered by the Register-General of Cooperative Societies; banned from deposit-taking activities; sold to new investors; managed by appointees; and put in receivership. The management of three other distressed banks (United Asia, Bank Perwira Habib Bank and Sabah Bank) were revamped by the central bank in 1986. The capital base of the four insolvent commercial banks was also strengthened by a combination of the injection of fresh equity through right issues from the existing shareholders and financial assistance from the Bank Negara, the central bank.

Orders to freeze the operations of the insolvent commercial banks and DTCs in Malaysia, the lifting of the freeze orders, or the variation of the terms of the scheme to rescue them all require the sanction of the High Court. In contrast, the rescue schemes in Indonesia have been determined solely by administrative fiat. To identify and assist domestic banks to solve their problem loans, Bank Indonesia and the Ministry of Finance have established the State Bank Supervision Team for the state-owned banks and the Special Task Forces for private banks.

9.6 MONEY MARKETS

A list of financial instruments traded in money markets in Malaysia and Indonesia is provided in Table 9.8. Malaysia developed its money market in the first half of 1980s, mainly for selling government securities to finance public-sector budget deficits. The deficits have typically been financed by external borrowings and from domestic non-bank sources, particularly the EPF. In the beginning, treasury bills and other maturing government securities and investment certificates were the money market instruments traded in the Malaysian money market. Other financial instruments, such as profit-sharing investment certificates, housing bonds, floating rate negotiable certificate deposits, banker acceptance, and negotiable certificates of deposits were introduced during period 1988–9. Partly because of federal government budget surpluses and the privatization of state-owned enterprises, both public sector deficits and the amount of government securities have significantly declined.

To cope with the need to have instruments to conduct open market operations amid the rising short-term capital inflows, in February 1993 Bank Negara began to issue Bank Negara Bills (BNBs), which are similar to treasury bills and Malaysian Saving Bonds (MSB). Established in 1990, the Rating Agency Malaysia Berhad (RAM) is assigned to rate non-bank corporate issuers of debt securities. In addition, private companies who wish to issue bonds were required to obtain prior approval from the central bank.

Indonesia, in contrast, has no domestic government debt, because the government has a policy of financing its budget deficit through external debt, preferably at concessionary terms from official sources. The money market was introduced in April 1984, nearly a year after the first stage of banking reform on 1 June 1983, which reduced the scope of the credit programme and liberalized interest rates. Since then, the SBI (Bank Indonesia Certificate) has been the most important money market

instrument. The *Surat Berharga Pasar Uang* (SBPU), a second money market instrument, was introduced in February 1985. The SBPU is a short-term bill in the form of a promissory note or trade bill co-signed by a bank or NBFI, which can be rediscounted at Bank Indonesia. Because the market has not worked effectively, at times, the Ministry of Finance and Bank Indonesia have forced the state banks and non-bank, state-owned companies to buy SBIs. A small amount of bonds have been issued by Bapindo, some regional development banks, a state-owned toll road company (PT Jasa Marga) and a small number of private companies. The number of corporate bonds and commercial papers issued by state-owned and private non-bank companies is expected to increase following the establishment of PT Pefindo, a privatly owned rating company, in 1995.

9.7 THE IMPACTS ON MONETARY AGGREGATES

One problem associated with the financial reform has been the erosion of the autonomous power of the monetary authorities to direct monetary policy at domestic policy targets in order to preserve internal and external stability. As will be discussed later, the erosion of monetary policy has been happening in Malaysia and Indonesia since long before the financial sector reforms were initiated in the 1980s. The reason has been the rising roles of less regulated NBFIs – non-bank financial institutions, which operate much like commercial banks.

Controls on Monetary Aggregates

In the beginning, the financial sector policy reforms in Malaysia and Indonesia brought about major changes in the financial system that caused shocks both in the money supply and in the money demand function. The end of direct control on interest rates and credit rationing has made interest rates the opportunity cost of holding money and has raised the usefulness of interest rates for monetary policy. The rise in interest rates, however, has ignited portfolio shocks and altered the characteristics of money demand function. Although market interest rates have risen, the effective rates may have fallen following the reforms, certainly at the margin. In the old system of financial repression, the official interest rates were low, but effective marginal rates were high because the credit was rationed. To a certain extent, household interest rate payments are tax-deductible, lowering the effective interest rates. This raises the demand for credit at any

Table 9.8 Malaysia and Indonesia: money market instruments

Country/type of instrument	*Issuers*	*Date of introduction*	*Major buyers*
I. Malaysia			
(1) Treasury bills	Treasury	March 1955	CB and DH
(2) Government securities	Treasury	1961	EPF and CB
(3) Investment Certificates	Treasury	July 1983	Bank Islam
(4) Central Bank Certificates	Bank Negara	1979	Selected financial institutions
(5) Commercial bills:			
(a) Trade bills			
(b) Banker acceptance		May 1979	
(c) Negotiable certificates of deposits (NCD)	CB and FC[a]	May 1979	
(6) Cagamas bonds	Cagamas	December 1988	
(7) Floating rate NCD	CB and FC	June 1988	
(8) Private corporate bonds	Private companies	January 1987	
(9) Promissory notes			
II. Indonesia			
(1) Central bank certificates (SBIs)	Bank Indonesia	April 1984	CB and NBFIs
(2) Surat Berharga Pasar Uang (SBPUs)	Non-bank private companies, but endorsed by banks	February 1985	CB and NBFIs
(a) Trade bills			
(b) Promissory notes			
(3) Corporate bonds			NBFIs
(4) Bonds issued by financial institutions			
(5) Negotiable certificates of deposit			NBFIs

CB = commercial banks; DH = discount houses; EPF = employees' provident fund; FC = finance companies; NBFIs = non-bank finance companies.

[a] The amount of Negotiable Certificates of Deposit (NCD) that a commercial bank or finance company can issue is subject to a limit set by the central bank, based on the issuer's capital funds.

level of interest rate. On the other hand, the new rules and regulations on commercial banks also affect the money supply function, making the developments in money supply and credit aggregates more difficult to interpret. Under the present risk-based capital standard, an expansion in loans (assets) of a commercial bank is linked directly to the size of its capital. Unlike in the system of reserve ratio, a commercial bank cannot simply borrow funds from surplus institutions in order to increase its capability to make loans. In the credit ceiling model, the authorities determine directly the amount of an individual bank's loans, independently of the level of its reserve deposits and capital base. Under the CAR system, those banks with limited capital were forced to shrink the size of their capital portfolio or to replace greater emphasis on those assets with low risk weight and, therefore, a lower capital cost.

A combination of the rise in domestic interest rates, of market expectations of changes in local currencies and of liberalization of capital accounts has attracted larger private sectors capital inflows to both Indonesia and Malaysia enabling the financing of larger current account deficits and the accumulation of international reserves in both countries. Meanwhile, the structure of the private capital inflows has also been moving more towards short-term private flows. Commercial bank loans remain the main type of private capital inflows to Indonesia. Meanwhile, the share of portfolio investments through capital and money markets has been rising fast in Malaysia. In an open economy with a fixed exchange rate and more developed financial markets, monetary policy is less effective, because it can affect only the composition of liquidity. To maintain the same level of money supply, the increase in international reserves from a surplus in the current account should be accompanied by a reduction in domestic credit (either from the central bank or commercial banks) by an equivalent amount; otherwise, the credit expansion ignites inflation and reduces interest rates. Massive capital inflows also tend to appreciate domestic currency and to lower prices and wages.

During the early period following the financial liberalization, capital inflows were effectively controlled and financial markets were relatively underdeveloped in both Malaysia and Indonesia. These allowed sufficient autonomy for the interest rate and exchange rate objectives to be treated separately. The ability of the central bank to raise domestic interest rate has drastically diminished as the capital movements have became increasingly interest-rate-sensitive. Internationalization of financial markets makes capital flows increasingly sensitive to interest rate differential and exchange rate expectations. As a result, monetary policy has become more complicated, constrained as it has been by foreign economic policies and

events. As we saw earlier, this, and the inadequate size of the available money market instruments to mop up the capital inflows, have forced the authorities to reimpose stricter quantitative and qualitative controls on short-term capital inflows. Because these are perceived as inadequate, both countries are willing to use the central banks and state-controlled firms as fiscal agents to mop up the excess reserves.

The developments of components of monetary bases in Malaysia and Indonesia, shown in Figure 9.1, indicate the different responses of monetary policy to the surging capital inflows in the 1990s. The annual rates of growth of M1 in Malaysia and Indonesia were around 36 per cent and 25 per cent, respectively, between 1992 and 1994. To keep the nominal external value of the ringgit stable, the authorities in Malaysia sterilized much of the short-term private capital inflows. The other part of the capital inflows, which initially were in the form of bank deposits, did not have a significant impact on lending, because they were absorbed as excess reserves of the banking system at Bank Negara Malaysia. The combination of these policies has resulted in the continuous buildup of the net foreign assets of the banking system.

The rapid rates of growth of both the domestic and the foreign assets of the Malaysian banking system had reduced commercial banks' (lending) interest rates between 1993 and the first quarter of 1994 (Figure 9.2). Beginning in February of that year, the ringgit was allowed to slightly appreciate (Figure 9.3). Starting from the second quarter of the same year, the interest rates were moving upward slowly, because of the increasing sterilization operations and quantitative restrictions on capital inflows imposed by the authorities. The interest rates, further increased owing to more stringent restrictions, were put in place to minimize the contagion effects of the tequila effect the currency crisis in Mexico in late 1994, which was felt in Asia, after a time lag, in the first quarter of 1995. To hold back further rises in interest rates, Bank Negara Malaysia defended the external value of the Malaysian ringgit by intervening in the foreign exchange market. This reduced the net foreign assets of the banking system.

Monetary policy in Indonesia is constrained by the financially distressed domestic banking system. The ability of Bank Indonesia to raise interest rates and the ratio of the reserve requirement is limited, because this would further weaken the banking system. In addition, the bailout of the banking system has contributed to the acceleration of Bank Indonesia's net domestic credit. Part of the capital inflows is used to strengthen the capital of domestic banks. Figure 9.1 shows a rapid growth of the net domestic assets of the banking system at the cost of a sharp erosion in its

net foreign assets in 1989–90. There was a sharp decline in net domestic assets of the banking system in 1991, as a result of the instruction of the Minister of Finance Dr J.B. Sumarlin, in February of that year, to a number of large state-owned enterprises to switch their deposits at state-owned banks into SBIs. This initially withdrew Rp7 to Rp8 trillion ($3.64 to $4.1 billion at the then exchange rate of Rp1923/$) from the monetary base. The net withdrawal amounted to Rp2 trillion, as Bank Indonesia offset part of the sale of SBI with its purchase of SBPUs.

The interest rates in Indonesia, as measured by cutoff rate in auctions of 90 days SBIs, peaked in March 1991 following the Sumarlin shock in the previous month. Interest rates started to move upward again in the first quarter of 1995, following the Tequila effect. As in Malaysia, Bank Indonesia also intervened in the foreign exchange market, depleting its foreign exchange reserves by between $500 and 600 million to defend the external value of the rupiah and hold the rise in interest rates.

As indicated earlier, exchange rate policy plays two roles. On the one hand, jointly with other policies, it plays an important role in promoting both external and internal macroeconomic stability. On the other hand, exchange rate policy, also jointly with other policies, helps to maintain the international competitiveness of the domestic economy. There is no indication that Malaysia and Indonesia have used the exchange rate as a nominal anchor and have allowed the rupiah to appreciate as an instrument for generating fiscal revenues and curbing domestic inflation rates. As a matter of fact, the authorities in both countries have used the exchange rate policy to correct 'the Dutch disease' problem, or the appreciation of their domestic currencies, since the oil boom period in the 1970s.[13] As shown in Figure 9.3 (for Malaysia) and Figure 9.4 (for Indonesia), in general, both countries have been using the same exchange rate policy to encourage the production and exports of non-oil traded goods, to curb both domestic demand and imports and to attract capital inflows. The figures, however, indicate that both nominal and real effective exchange rates have been recently appreciating that have been aimed at reducing in both Malaysia and Indonesia. This is partly as a result of government policies in these countries the high cost of the sterilization operations of the large capital inflows through enlarging the intervention bands of their currencies, so as to allow market forces a greater role in setting the exchange rates. Concurrently, greater exchange rate flexibility introduces uncertainty, which may well discourage part of the purely speculative capital flows and allow a higher degree of freedom for the monetary authorities to exercise control over monetary aggregates.

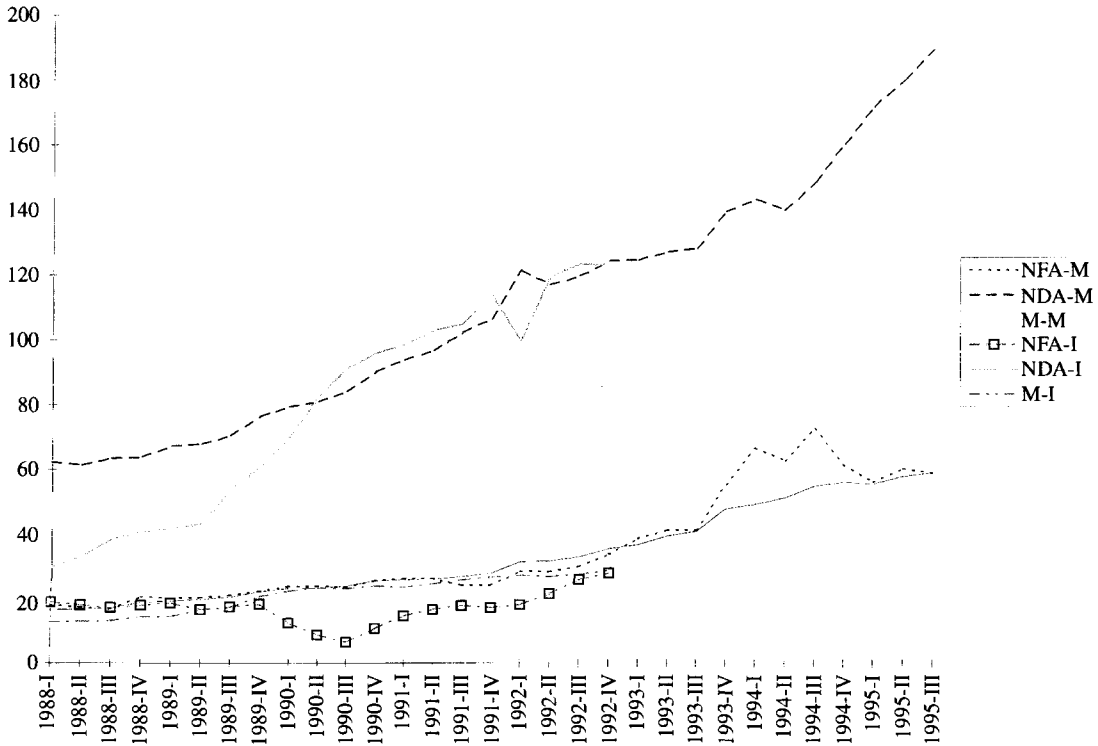

Figure 9.1 Malaysia and Indonesia: components of monetary base 1988–95 (billion in local currencies)

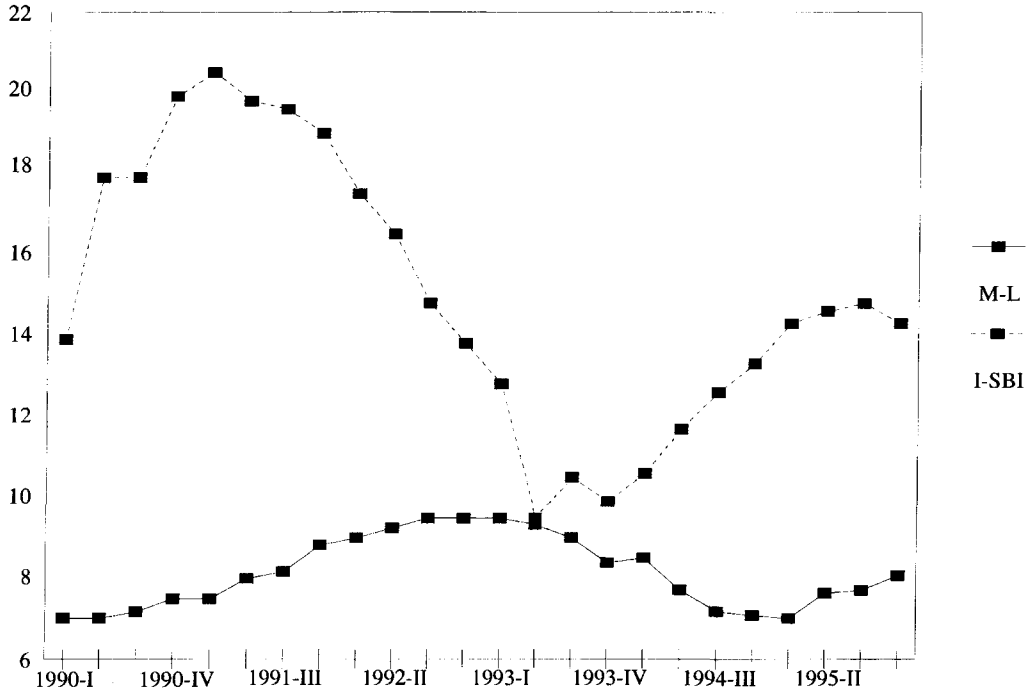

Figure 9.2 Malaysia and Indonesia: developments of interest rates, 1990–5 (% per annum). Lending rates for Malaysia (ML) and cutoff rate in auctions of SBI for 90 days
Source: IMF, *International Financial Statistics*, for Malaysia; and Bank Indonesia, *Weekly Report*, for Indonesia, various issues.

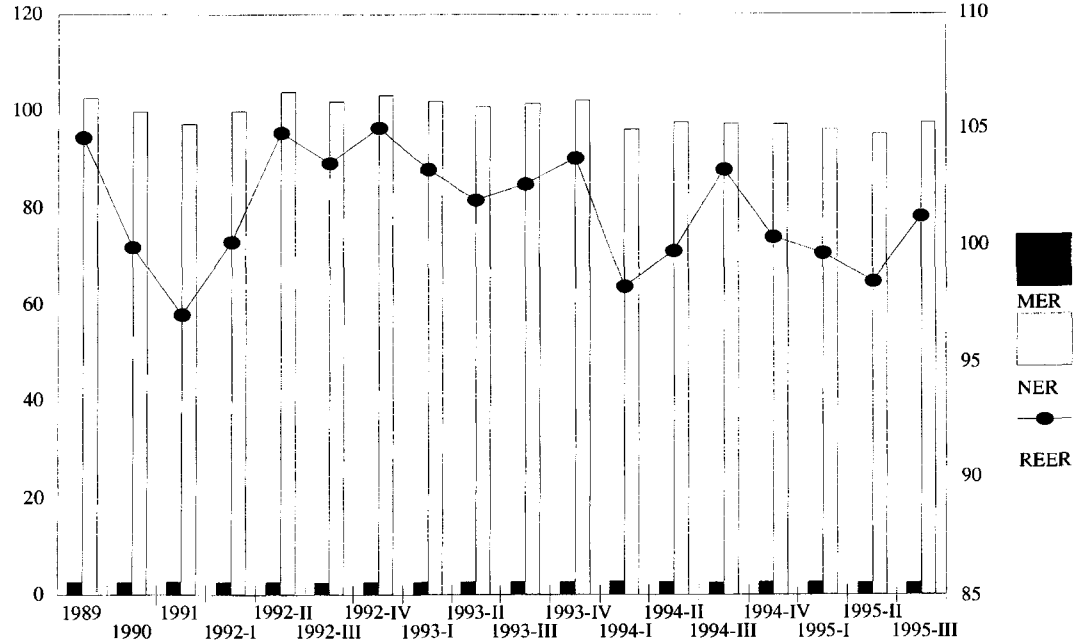

Figure 9.3 Malaysia: market exchange rate, nominal effective exchange rate (NER) and real effective exchange rate (REER), 1988–95

Source: IMF, *International Financial Statistics*, various issues.

MER is the period average market exchange rate, NER is nominal effective exchange rate (expressed on base 1990 = 100) and REER is the index of real effective exchange rate. REER is defined by the IMF as 'nominal effective exchange rate index adjusted for relative movements in national prices or cost indicators of the home country and its partners-or-competitor-countries'.

The Non-Bank Financial Institutions (NBFIs)

As noted earlier, the autonomy of monetary authorities in conducting monetary policy in both Malaysia and Indonesia was greatly reduced or lost long before the financial sector reform. The repressive rules and regulations in the financial sector were felt mostly in the state-owned banks (in the case of Indonesia) and the state-controlled banks (in the case of Malaysia). The rapid growth of unregulated investment finance companies and merchant banks had increased the share of the grey market during the era of the 'oil boom' in the early 1970s. The finance companies are the second largest group of deposit-taking institutions in both Malaysia and Indonesia. Merchant banks are licensed to operate as specialized financial intermediaries in the money and capital markets. In reality, however, merchant banks have operated like finance companies in Indonesia. As noted earlier, prior to the recent reforms, the non-bank financial institutions in Indonesia were regulated and supervised by the Ministry of Finance. However, they were practically unregulated owing to the low supervisory capability of the Ministry of Finance. As a result, the authorities found themselves with the a choice of either letting the unregulated markets dominate the state-owned banks or else permitting financial reform and accepting some associated erosion of the autonomy of state-owned banks. On the external side, capital flows were also rising because of increasing transactions with foreigners and the internationalization of the business sector.

Except that they are prohibited from accepting demand deposits, in reality, the operations of the investment finance companies are very similar to those of commercial banks. The finance companies are allowed to accept savings and time deposits with a minimum of three months' maturity from the general public. Loans extended by the finance companies are mainly instalment-plan loans, leasing finance, housing loans, and loans for a variety of other purposes, particularly for the purchase and development of real estate and other durable investment and consumption goods. The finance companies are, therefore, the competitors of commercial banks in providing short-term business financing and consumer credit. Unlike the heavily regulated banking sector, particularly the state-owned banks, the investment finance companies were unregulated. The operations of these financial institutions are constrained only by regulations on gearing ratio, that is, the maximum an investment finance company may borrow in relation to its own shareholders' fund (limited to fifteen times in both countries), and the ceiling on foreign borrowings. This freedom of action has permitted the investment finance corporation to adapt more

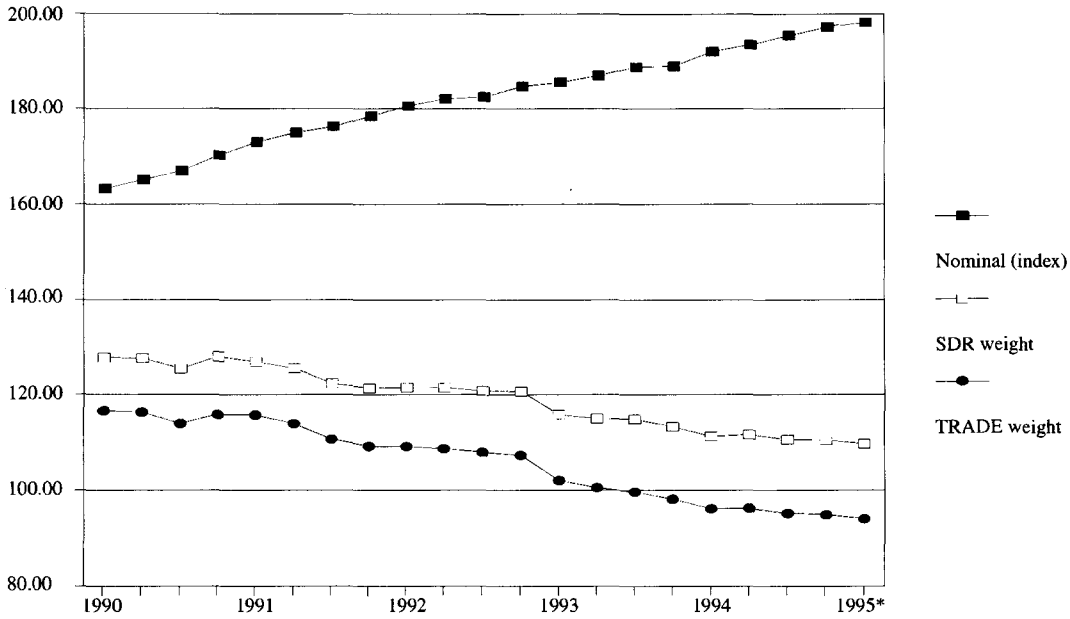

Figure 9.4 Indonesia: real effective exchange rates (REER), 1990–5 (1985 = 100)
Note: Real effective exchange rate (REER) are calculated by the equation $(e^*pf)/p$, where e is the exchange rate, pf the foreign CPI, and P the domestic CPI. The SDR and TRADE valuation basket consist of the currencies of the five members having the largest exports of goods and services during the period 1985–9, the weights for SDR being US$ 42%; Japanese yen 19%; DM, French franc and British pound sterling 13% each; the weights for TRADE were: US$ 3.68%; British pound sterling 2.6%; Japanese yen 59.85%; French franc 1.89%; DM 4.96%. Beginning 1 January 1991, the weights for SDR were US$ 40%; DM 12%; Japanese yen 17%; French franc and British pound sterling 11% each.

rapidly and effectively to changes in the economic and financial situation than the banks. To attract large-denomination certificate deposits, finance companies have offered higher deposit rates than those offered by commercial banks. In Indonesia, these institutions were also being used by the state banks and Bank Indonesia to extend short-term credit and to invest in sectors and activities that the banks themselves could not reach during the previous financial repression. These practices ended with the elimination of the repressive system of credit ceilings cum selective credit policy with subsidized interest rates in January 1990. As their experiences had been mostly in providing short-term credit, the twelve investment finance companies in Indonesia opted to become commercial banks in 1992.

As noted earlier, other finance companies (such as leasing, factoring, consumer financing and credit card companies) in Indonesia were by law regulated and supervised by the Ministry of Finance (MOF) until December 1995. Because the MOF has no capability to implement the supervisory tasks, these institutions were, in reality, unregulated and unsupervised. Following the financial sector reform in the late 1980s, the finance companies were the main suppliers of housing and car loans and other types of consumer credit. In both countries, these institutions have also been used as 'cash dispensers' to buy shares of companies owned by the politically well-connected private sector business conglomerates.

9.8 CONCLUSIONS

All the financial indicators (M1/GDP, M2/GDP, TAFI/GDP, and market capitalization/GDP) point to the financial system of Malaysia being more developed than that of Indonesia. Aside from having a much higher level of income per capita, this country has a relatively more stable economy and social system than that of its neighbour. Moreover, prior to recent reforms, the financial repression in Indonesia was much longer and more severe than in Malaysia. In terms of assets and of the number of institutions, however, the banking system remains the core of the financial system in these countries. Other financial institutions are fast-growing segments of the system, but their roles have not been as important as that of the banks.

The technocrats are liberalizers in Indonesia. As advisers to the government, they may not have formal executive positions. But they are still powerful, and are listened to by their successors and foreign lenders. Whereas Bank Indonesia has tended to retain direct controls on the banking system, Bank Negara Malaysia has been the initiator of financial

sector reform in Malaysia and the Ministry of Finance has played a supporting role.

Indonesia has adopted a different sequencing of both economic and banking sector reforms since the early 1980s. In general, the coverage and speed of policy reform in the financial sector has been much wider and faster than in the real sector of the economy. The banking sector reform started in June 1983, with the relaxation of controls on interest rates and the elimination of sectorial loan allocations. However, the short-term money market was only beginning to develop in April 1984. A more drastic reform was introduced in October 1988, but new prudential rules and regulations were announced only two years later. Furthermore, as many of the banks, including the state-owned banks, were having difficulty in meeting the prudential standards, the authorities have had to retreat by relaxing the rules and regulations. Because a legal and accounting system cannot be built overnight, the focus of bank supervision in Indonesia is likely to remain more on the regulatory aspects of the supervisory functions. Inherited from the colonial past, the basis for securing contract and credit transactions is weak, while the laws and procedures on exit and bankruptcy are unclear. Financial disclosure is poor, owing to the weakness in the implementation of accounting requirements and in the standards and training of public accountants.

In contrast, Malaysia implements a gradual but more consistent approach of financial sector deregulation, accompanied by a more proper sequencing as prescribed by the textbook. In contrast to Indonesia, Malaysia retains special-purpose banks, heavily protecting its domestic banks from foreign competition and giving special market preferences to state-controled institutions. Traditionally, Malaysia has a modern and adequately good market infrastructure. Partly in order to dump public sector debt, Malaysia developed a short-term money market in the early 1980s, before it deregulated interest rates in 1987.

The transition process to the more competitive environment and stricter rules and regulations has been more difficult for the banking system in Indonesia. The problems are not limited to the state-owned banks, which are traditionally undercapitalised, and to the inherited larger portion of low-yield but non-performing assets from the past credit programme; the number of bank crises among the private banks has also been rising in recent years. In contrast, insolvency in Malaysia occurred only in the 1980s, involving a single commercial bank and a number of deposit-taking cooperatives.

Both Malaysia and Indonesia have neither compulsory nor voluntary security funds, such as deposit insurance. In principle, the owners and

managers of the banks are made responsible for strengthening the capital base and for solving the problem loans of their banks. However, when they cannot solve the problem themselves, the central banks usually step in to prevent systematic risks that might jeopardize public confidence in the banking systems of their countries. Nevertheless, it is not very clear how the central banks in both Malaysia and Indonesia exercise their role as the lender of last resort to prevent systemic risks in the financial markets.

The exchange policy in Malaysia and Indonesia has been used mainly to help maintain international competitiveness of domestic economy. In the case of Indonesia, however, the weak financial condition of the banking system has limited the ability of the central bank to exercise monetary policy, raise interest rates and decelerate domestic credit. Higher interest rates worsen the financial conditions of the commercial banks and raise the interest burden of Bank Indonesia's certificates of deposits.

Notes

1. Deposit money banks (DMBs) are commercial institutions whose demand deposits are important or form a large share of their total liabilities. Although the commercial banks are the main component of DMBs, other special purposes financial institutions such as development, savings, and cooperative banks may also included in this category when their liabilities are regarded as money (see IMF Institute, 1981).
2. Includes savings deposits and NOW accounts, automatic transfers service accounts at banks and thrifts institutions, and share draft accounts held at credit unions or cooperative banks.
3. Prior to the present form, JSE was reopened on 4, June 1952 after being closed since the beginning of the World War II. However, owing to economic and social instability its activities were again officially suspended in 1968. In August 1995, the less active Surabaya Stock Exchange was taken over and merged into the Parallel Bourse of Jakarta, to allow smaller companies with good growth prospects to have access to the capital market, for example via the second board established in Kuala Lumpur in November 1988.
4. Until 1989, PT Danareksa had a special right to buy at least 50 per cent of every new issue in the first instance, but no obligation to purchase any percentage of an issue. Once PT Danareksa has taken up a percentage of an issue, it places the shares in its investment portfolio and may then issue bearer certificates, relating to the specific companies backed by certain percentage shares in its portfolio, in small denominations which it sells to general public in order to democratize the companies' ownership. Foreign investors were banned from the security markets. Until October 1988, income from investment in financial securities was subject to 15 per cent withholding tax, while interest on bank deposits was free from such tax.

5. Under the leadership of Professors Widjojo Nitisastro (the former Minister of Development Planning) and Ali Wardhana (the former Minister of Finance) the 'technocrats' have been the architects of the economic development of Indonesia since 1966. The group consists of professors of the Faculty of Economics at the University of Indonesia.
6. State-owned enterprises in Malaysia are defined as those with more than 50 per cent of their equity held by the government. In the mid-1980s, there were 56 non-financial state-owned enterprises, but this number was gradually reduced to 42, as of the end of 1993, through privatization. The privatization includes transfer of the equity ownership to the private sector of the following companies: PETRONAS (the petroleum company), Telekom Malaysia Berhad (TMB), Tenaga Nasional Berhad (TNB), Malaysian Airlines (MAS), Cement Industries of Malaysia, Edaran Otomobil Nasional, Sports and Toto Malaysia and the Heavy Industries Corporation of Malaysia (HICOM Holding Berhad). On the performance, problems and prospects of privatization of state-owned enterprises in Malaysia see, among others, Mohammad Sheriff bin Mohammad Kassim (1991) and on criticisms to the programme see articles edited by K.S. Jomo (1995).
7. Aside from formal budgetary and credit programmes, Indonesia has also a number of semi-formal schemes to help finance the cooperatives and small-scale enterprises and poverty alleviation programs. These include a decree issued by the Minister of Finance in 1989 to require all state-owned enterprises, including banks, in Indonesia to channel between 1 and 5 per cent of their profits to provide funds to the cooperatives and small-scale enterprises at concessionary terms. Domestic conglomerates have been called to donate between 1 and 25 per cent of their listed shares to those sectors. In December 1995, the President and a group of cabinet ministers, the Director General for Taxation and private businessmen, in their private capacity, established the Yayasan Dana Sejahtera Mandiri (Self-Reliant Prosperity Funds). The foundation aims to help the government's poverty alleviation programme under the coordination of the office of the state Minister of Population. The target funds collection is Rp1.15 trillion, to be loaned to 11.5 million poor families: Rp100 000 each, with interest at 6 per cent per annum. Presidential Decree no. 90 of 1995 calls on individual and companies with income tax of more than Rp 100 million per annum to donate up to 2 per cent of their earnings to the foundation.
8. At the end of 1990, this concessionary credit was made available for BPPC (Badan Penyangga dan Pemasaran Cengkeh) to finance its buffer stock of cloves, the main ingredient of clove cigarettes. The recipient of this credit is a consortium of private traders who have powerful political backing and have been granted the exclusive right to operate a buffer stock for that agricultural commodity.
9. The collapse of Bank Summa in 1992 has resulted in the loss of control over the flagship company of the Surawijaya family, PT Astra International, then the largest company listed on the Jakarta Stock Exchange.
10. The World Bank, *Annual Report 1993*, Table 7–5, p. 177. This amount is much less than the amount of capital injected into PT Bank Duta ($419 million), a relatively much smaller private bank, in September 1990, to cover its losses from foreign exchange speculation. The injection come

from outright gifts from the 'friends' of the three social foundations (all chaired by President Suharto), the major shareholders of the bank.

11. PT Askrindo is a state-owned insurance company, established in 1974, primarily to insure the past investment and working capital credit programme for medium and small-scale enterprises (KIK and KMKP programmes). PT Asei is a state-owned export insurance company, and Perum PKK a state-owned company for insuring credit for cooperatives. Mainly because of insuring the excess credit of commercial banks above their legal lending limits, PT Askrindo accumulated losses amounted to Rp390 billion ($1987.52 million) in 1992, equivalent to nearly ten times its paid-up capital.
12. The trials of former Directors and key officials of Bapindo allegedly indicate that Admiral (ret.) Sudomo, the then Coordinating Minister for Security and Political Affairs, and Professor J.B. Sumarlin, the then Minister of Finance, were, between 1989 and 1992, directly involved in arranging unsecured loans from the bank to the Golden Key Group (originally in partnership with President Suharto's son Tommy Mandala Putra) of the sum $565 million for financing highly inflated investment costs of petrochemical projects. All former Managing Directors and key official of Bapindo were sentenced to various terms of imprisonment, and Mr Edi Tansil, the owner of Golden Key Group, was sentenced for 17 years prison term in August 1994. At present, Mr Sudomo is the Chairman of the Supreme Advisory Council and Dr Sumarlin the Head of Supreme Audit Board. With the help of a bribed chief warder, Eddy Tansil escaped from Jakarta's Cipinang prison on May 4, 1996.
13. Following the partition of Singapore from the Federation of Malaya, Malaysia terminated interchange ability of the Singapore dollar at par with the Malaysian ringgit on 8 May 1973. This was followed by the introduction of a freely floating Malaysian dollar regime in the following month on 21 June. Indonesia replaced the nominal anchor of the rupiah from the US dollar to as undisclosed basket of convertible currencies in November 1978. Because the growth of their economies depends on non-oil exports, the central banks in these countries monitor exchange rate developments against baskets of currencies and intervene in the interbank foreign exchange markets to influence the external value of their respective national currencies.

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10 Banking on the Transition

Rodney Schmidt[1]

10.1 INTRODUCTION

In 1989–91 the centrally planned countries of Central and Eastern Europe (CEE)[2] liberalized most prices and international trade. These and other transition reforms revealed how little the physical capital of state enterprises is worth in a market economy.[3] The low value of the capital assets is due to investment inefficiency under central planning and the decline in the investment rate preceding the transition, the abrupt change in relative prices that initiated the transition period, and the discontinuation of external subsidies when the Soviet trade bloc collapsed.

State enterprises were uniformly affected by these changes. Carlin *et al.* (1995) report that a review of enterprise-level surveys in CEE failed to turn up a single state enterprise that benefited from the transition reforms. As a result, the low capital value of individual enterprises is reflected in productive resource misallocation at the sector level.[4] The combined impact of the low worth of state enterprises, macroeconomic resource misallocation, and the entry of new private enterprises manifests itself in a structural duality characteristic of transition economies in CEE. This duality is evident in the systematically low productivity rates in state enterprises relative to the new private enterprises.[5] The goal of the transition in CEE is to eliminate the productivity differential and integrate the economy.

Recent advice on how to achieve this goal focuses on privatization of state enterprises, in the belief that establishing clear property rights over assets would encourage enterprise restructuring. However, this emphasis has been frustrated by the influence of insiders in the privatization process (Aghion *et al.*, 1994a; Blanchard and Aghion, 1996). As a result, privatization has had no systematic effect on state enterprise restructuring and productivity. Paradoxically, state enterprises have engaged in significant restructuring before being privatized, although it does not normally involve investment (Carlin *et al.*, 1995; EBRD, 1995; Grosfeld and Roland, 1995).

While the relative roles and optimal sequence of privatization and bank reform in the transition remain under-researched, two observations are evident. First, widespread defensive enterprise restructuring observed in state enterprises in the advanced transition economies is due largely to the

success banks have had in imposing financial control, or hard budget constraints, on enterprises.[6] Second, the transition cannot succeed without significant investment in enterprises,[7] which must be financed from outside sources. Moreover, the only potential outside capital market during the transition is one based on banks. Transitional securities markets have capitalization and liquidity levels lower than those in developing countries (Neave *et al.*, 1994), a situation that is likely to continue for the foreseeable future. These markets cannot price risk or generate information efficiently (Cashin and McDermott, 1995), or provide the control and governorship of enterprises necessary for raising investment by issuing minority equity.

This chapter assesses the role of banks in the transition to a market economy. We are interested in describing and explaining bank performance and identifying constraints that prevent banks from playing a more active role. Early opinion on this issue was sharply divided. Optimists tended to equate the transition with the achievement of decentralized credit allocation, without delving into sequencing issues (Calvo and Kumar, 1993; Fries and Lane, 1994; Long and Sagari, 1991). Pessimists questioned the ability of banks to control enterprises, where control is interpreted as the ability to select viable enterprises and liquidate non-viable ones (Bofinger, 1992; McKinnon, 1993; Perotti, 1993; Rostowski, 1993). More recent contributions focus on particular aspects of bank performance, including their ability to provide credit efficiently (Thorne, 1993), restrict enterprise credit (Dittus, 1996; 1994) and complete enterprise debt workouts (Baer and Gray, 1995; van Wijnbergen, 1992). There has also been a vigorous discussion of the merits of a unversal banking structure (Corbett and Mayer, 1992; Grosfeld, 1994; Mayhew and Seabright, 1992).

Thus far there has not, however, been a systematic review of the performance and role of banks in the transition. This chapter attempts to fill the gap. We do so by reviewing, in Sections 10.1 and 10.2, bank credit performance and financial control over enterprises. In Sections 10.3 and 10.4 we explain this performance by identifying bank incentives individually and the way they, as a package, condition bank behaviour. Our conclusions are tentative, because the evidence is often spotty and sometimes conflicting. We end the chapter with policy recommendations and suggestions for further research.

10.2 BANK PERFORMANCE

This part reviews aspects of bank credit performance characterizing bank lending to enterprises and financial control over enterprises during the

transition. These aspects are, first, the path of real enterprise credit in the months immediately after the initial transition reforms and the years following, and the divergence in real credit provision between the advanced and the less advanced economies of CEE; second, the large quantity of non-performing loans on bank balance sheets inherited from the central planning era, and the recurrence of such loans during the transition; third, the general shortening of loan maturities and the possible effect on enterprise investment; and finally, the infrequency and limited success of intervening in the affairs of defaulting enterprises.

Credit to Enterprises

Monetary reform is a central component of the transition strategy, and consists of a shift from passive to non-accommodating monetary policy. In the early months and years of the transition this shift was achieved by imposing bank-specific credit ceilings. As a result, and owing also to unexpectedly steep price climbs, real enterprise credit initially fell sharply (Table 10.1; bank claims on non-government are mostly claims on enterprises). The fall in Hungary was more gradual, possibly because of the earlier partial introduction of bank reforms.[8]

In subsequent years, enterprise credit performance in the less advanced and the advanced transition countries diverged. In Bulgaria and Romania enterprise credit as a percentage of GDP declined dramatically. This was due to a fall in the ratio of deposits to GDP, and, via the balance sheet relation of deposit-taking banks, total claims outstanding. The Bulgarian figures are not as dramatic as the Romanian, but the effect is similar, given the very high percentage of deposits denominated in foreign currency (about 50 per cent). In the Czech Republic, Hungary and Poland, deposit growth actually improved in the years following the transition reforms, and total bank claims held steady or, in the Czech Republic, rose substantially. Real credit to enterprises in these countries recovered from the initial shock, and then rose substantially in the Czech Republic, where fiscal deficits were eliminated by 1993, declined slightly in Poland with an increasing share of credit going to finance large fiscal deficits, and declined significantly in Hungary, owing to sharply rising fiscal financing requirements.

Although there is evidence of fiscal crowding out of enterprise credit in various countries, it does not explain the different paths of credit in the two country groups (compare fiscal deficits in Hungary and Romania). The different outcomes are related to inflation performance, but, again, inflation is not consistently correlated with fiscal developments. This,

together with the high share of bank credit allocated to enterprises, suggests that a main channel of inflation in CEE is through nominal enterprise credit. If such credit is non-discriminatory then it is a hidden subsidy to enterprises (Bofinger, 1992). A central challenge posed by bank credit performance during the transition is to explain why the advanced countries have succeeded in controlling inflation and increasing real enterprise credit while the less advanced countries have not.

Non-Performing Loans

At the beginning of the transition, banks were burdened with a high share of non-performing loans in total enterprise lending (Table 10.2). This share fell significantly in the following year, owing to bank recapitalization and debt restructuring schemes in most countries. However, non-performing loans rose again to significant levels during the transition, at least in the Czech Republic and Hungary (data are not available for Bulgaria and Romania).[9] This is worrying, because it indicates the failure of banks to control lending to enterprises which, if widespread and systematic, would lead to loss of control over the money supply.

Investment Finance

Another prominent feature of bank performance in CEE during the transition has been shortening of maturities of lending to enterprises:

> The reality is that the main element of banks' lending policies is the restructuring of the maturity compositions of their loan portfolios by reducing the shares of longer term loans (with maturity longer than a year) and substituting short-term loans, or securities issued by the state (Székely, 1993, p. 31).

Long-term loans, common prior to the transition, have all but disappeared, and it is difficult to obtain loans with a maturity of more than one year in the Czech Republic, Hungary and Poland (Dittus, 1994). In the Czech Republic, 73 per cent of bank lending in 1993–4 had a maturity of one year or less, with 18 per cent having a maturity of between 1 and 4 years. This compares with about 20 per cent short-term lending in industrial countries (EBRD, 1995). In Hungary and Poland, over 80 per cent of total enterprise debt, including that held with banks and other enterprises, is short-term, defined as having a maturity of less than a year (Baer and Gray, 1995). This abrupt change in bank lending practices has had an

Table 10.1 Central and Eastern Europe: deposits and claims of the commercial banking system (% of GDP)

		1987–89	*1990*	*1991*	*1992*	*1993*	*1994*	*1992–4*
Bulgaria[a]	Broad money	—	—	76.1[b]	63.8	64.8	60.0	62.9
	Total claims	—	—	132.0	112.0	114.0	91.5	105.8
	Non-government	—	—	85.0	66.7	59.4	43.2	56.4
	Private sector	—	—	9.6	7.7	9.0	10.3	9.0
	(% priv. VA)[e]			(57.8)	(30.4)	(25.1)	(25.6)	(27.0)
Memorandum items	General Government balance	–1.4[c]	–12.8	–14.7	–15.0	–15.7	–7.0	–12.6
	Inflation	6.4[c]	26.3	333.5	82.0	73.0	96.3	83.8
Czech Republic	Deposits	—	—	60.3[b]	60.5	66.0	70.1	65.5
	Total claims	—	—	67.7	70.4	69.5	71.1	70.3
	Non-government	—	73.6[b]	63.7	66.8	68.7	69.8	68.4
	Private sector	—	9.0[b]	10.5	19.4	30.9	38.6	29.6
	(% priv. VA)[e]	(—)	(73.2)[b]	(60.7)	(70.0)	(68.5)	(68.6)	(69.0)
Memorandum items	General Government balance[d]	–2.8[c]	0.1	–2.0	–3.3	1.4	1.0	–0.3
	Inflation[d]	2.3[c]	10.8	56.7	11.1	20.8	10.0	14.0
Hungary	Deposits	28.4	29.2	34.7	37.1	38.2	33.9	36.4
	Total claims	44.2	44.6	43.7	41.2	41.7	40.5	41.1
	Non-government	42.2	42.6	39.0	33.1	27.9	24.9	28.6
	Private sector	—	—	—	—	—	—	—
Memorandum items	General government	–1.4[c]	0.5	–2.2	–5.6	–6.4	–8.2	–6.7
	Inflation	17.0[c]	28.9	35.0	23.0	22.5	18.8	21.4

Table 10.1 *(continued)*

		1987–89	*1990*	*1991*	*1992*	*1993*	*1994*	*1992–4*
Poland	Deposits	42.0	17.2	20.7	22.6	25.1	26.2	24.6
	Total claims	34.2	14.2	24.2	27.7	28.8	28.7	28.4
	Non-government	31.5	12.7	18.9	19.2	18.7	17.7	18.5
	Private sector	2.8	1.6	6.5	9.6	10.3	10.4	10.1
	(% priv. VA)[e]	(—)	(5.1)	(14.3)	(19.9)	(19.3)	(18.6)	(19.3)
Memorandum items	General government balance	–7.4[c]	3.1	–6.5	–6.7	–2.9	–2.5	–4.0
	Inflation	251.1[c]	585.8	70.3	43.0	35.3	32.2	36.8
Romania	Deposits	27.6	34.2	30.1	17.7	8.5	8.4	11.5
	Total claims	—	67.8	52.4	30.2	19.7	16.1	22.0
	Non-government	64.0	67.8	46.8	27.5	18.1	15.1	20.2
	Private sector	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Memorandum items	General government balance	8.4[c]	1.2	0.6	–4.6	–0.1	–3	–2
	Inflation	1.1[c]	5.1	174.5	210.9	256.1	131.0	199.3

Deposits: demand, savings, time and foreign currency deposits.

[a] Domestic credit basis. Approximately 50% of credits are denominated in foreign currency.
[b] End of period. Period average elsewhere.
[c] 1989.
[d] Czechosalvakia to 1992.
[e] private Value Added

Source: IMF staff estimates; IMF, *International Financial Statistics*; EBRD (1995).

Table 10.2 Poland, Hungary and the Czech Republic: non-performing loans of the banking system (% of total loans)

	1991	*1992*	*1993*	*1994*
Poland	40	28.0/16.0[a]	0.12[b]	—
Hungary	50	16.9/11.1[a]	17.5/22.2[c]	25.8
% of enterprise loans	—	35.9/27.4[a]	46.2/71.7[c]	68.9
Czech Republic	55[d]	19.0	23.8	37.7

[a] Before/after loans consolidation.
[b] Sample of six state banks.
[c] 1991/1993 classification rules.
[d] Czechoslovakia.

Source: National sources as reported by the IMF; Baer and Gray (1995); Dittus (1994); Thorne (1993).

Table 10.3 Poland, Hungary and the Czech Republic: sources of investment finance in enterprises (% of total investment)

	Poland[a]		*Hungary*	*Czech Republic*
	1992	*1993*	*1993*	*Jan–Jun. 1993*
Internal sources	58.1	63.3	54.2	72.7
Subsidies	5.6	4.7	26.1	4.8
Bank credit	10.8	8.7	3.4	16.8
Other[b]	25.5	23.3	16.3	5.7

[a] Excluding housing cooperatives.
[b] Poland: includes incompleted investment and foreign investment (9.8% in 1993). (Hungary: includes credit from international financial institutions. Czech Republic: includes foreign investment 2.0%).

Source: Grosfeld and Roland (1995).

effect on the maturity structure of the outstanding stock of bank credit. There is a significantly higher proportion of medium and long-term credits in the debt stock which, in view of the composition of current new lending, must have been made prior to the reforms.

There is also evidence that the shortening of bank credit maturities during the transition has constrained investment. Table 10.3 shows that in 1993 bank credit accounted for 10 per cent or less of investment finance in Poland and Hungary, and about 17 per cent in the Czech Republic. Most enterprise investment during the transition, which is low relative to levels in the era of central planning or in industrialized countries (EBRD, 1995), is financed from enterprise savings. Moreover, enterprise-level survey evidence suggests that this constraint is binding:

> The overwhelming impression from the case studies is that major investment in new capital equipment is a form of restructuring only available to enterprise managers where profits have been accumulated in the enterprise (Carlin *et al.*, 1995, p. 435).

Bankruptcy

Early analyses of the role of banks during the transition emphasized the need for banks to intervene when enterprises fail to service their debts (Bofinger, 1992; Calvo and Kumar, 1993). Such intervention might be to liquidate the enterprise in an attempt to recoup the value of the debt, or, where the liquidation value is low, owing to the low quality or value in alternative use of the capital assets, to reorganize the enterprise to increase its profitability (before debt service). In the event, however, intervention has not been an important instrument of control despite the adoption of a variety of legislative approaches (Dittus, 1994; EBRD, 1995; Grosfeld and Roland, 1995).

Hungary and Poland were among the first to implement market-based bankruptcy and debt workout procedures (for details see Baer and Gray, 1995, and references therein). In Poland, a bank conciliation law adopted in February 1993 shifted power from the courts and the borrower to banks to negotiate a workout agreement on behalf of all creditors. Furthermore, under the law, responsibility for monitoring the enterprise-restructuring programme is delegated to the lead bank. If the lead bank does not terminate an agreement when the restructuring plan is violated then it becomes liable for any additional losses incurred by the other creditors. The range of possible workout options is broad, and includes exchanging debt for equity.

The conciliation record has had mixed success. Agreements were reached by the April 1994 deadline with only about a third of the affected enterprises accounting for about half of the bad loans. Another 25 per cent of enterprises were placed under liquidation or bankruptcy proceedings, accounting for only 13 per cent of the relevant loans. The remaining enterprises repaid their debts, had them auctioned by the banks or had their

collateral executed. Only 13 per cent of all affected enterprises (19 per cent of affected loans) actually resumed debt service during the period from 1991 to 1994 (Baer and Gray, 1995). There was also little response to the option to swap bad loans for equity in the enterprise.

In Hungary, an automatic trigger mechanism for initiating bankruptcy or liquidation proceedings was adopted in 1992. The debtor enterprise was required to file for reorganization or liquidation after being in arrears for more than 90 days, failing which managers were personally liable. Creditors could file for liquidation after payment was 60 days overdue. Managers of bankrupt enterprises have the first opportunity to present a reorganization plan, and retain their jobs after filing. Creditors then vote on the plan, and can present alternatives. If an agreement cannot be reached then the procedure reverts to liquidation. The courts have relatively little involvement in the process. In the first two years of operation over 22 000 cases were filed, including over 5000 reorganization cases and over 17 000 liquidation cases. Only a very small number of these cases have been completed to date. The number of reorganization filings declined dramatically in 1994, possibly because of an amendment to the law in September 1993 to remove the automatic trigger.

These results are due in part to major problems with liquidation procedures in these countries. These problems include the low priority given to bank creditors in both Hungary and Poland, and poor information and accountability. Procedural costs and government (especially social security obligations), as well as employees' claims, often consume more than the entire estate. It is also hard to prevent enterprise managers from fraudulently disposing of assets before filing for or being forced into bankruptcy. Although debt workouts are becoming more common, creditors in both countries are still quite passive when it comes to initiating and overseeing enterprise liquidation.

In the Czech and Slovak Republics, revised bankruptcy laws were implemented in 1993. Between 1993 and mid-1995, 4500 petitions were filed, but only 600 bankruptcies had actually been declared, owing largely to a lack of judges and administrators. In Bulgaria and Romania bankruptcy laws have been in force only since 1994, and enforcement is cautious.

10.3 MONEY, CREDIT AND HARD ENTERPRISE BUDGET CONSTRAINTS

Banks tend to avoid intervening in enterprises that default on bank debt. They prefer instead either to refinance those enterprises or to cut them off

from further long-term credit and impose a discipline of inside or self-finance. This represents a failure of monitored lending throughout the CEE.

Thus, the stylized facts of bank credit performance in the transition to explain are enterprise refinance and self-finance. Before attempting an explanation, however, we devote this section to a deeper characterization of bank performance. In particular, we would like to address the difference in monetary impact of enterprise refinancing between the advanced and the less advanced transition economies and the consequent divergence in real enterprise credit performance. We would also like to comment briefly on the impact of the banks' performance on the pattern of enterprise restructuring and the transition dynamic.

We accomplish these goals first by discussing further the concepts of and relationship between refinancing and self-financing, and their motivations. We also present more evidence on the extent of refinancing behaviour. We then show how these concepts and behaviour patterns are related to inside and outside money systems. Next, we suggest that the achievement of an inside money system is equivalent to creating a banking sector that generally succeeds in imposing financial control or hard budget constraints on enterprises. Finally, we refer to the nature of hard budget constraints, which depends on the depth and fragility of the inside money system, to interpret the impact of bank credit performance on the transition itself.

Enterprise Refinance

Enterprise refinance is likely to be realized in the form of short-term operational or commercial credit, designed to allow the defaulting enterprise to survive. Contrary to normal commercial lending, short-term refinancing credit will tend to be rolled over. Because such credit is extended in order to avoid liquidating or closing the enterprise, thereby retaining an option value on long-term non-performing debt, it is effectively equivalent to long-term lending. Self-finance refers to the refusal to extend long-term credit or investment finance, either directly and independently of the enterprisis history of debt service, or by automatically rolling over unserviced short-term credit. Self-finance is consistent with the existence of a commercial credit line which is ended as soon as the enterprise falls behind on debt service. Both self-finance and refinance are inconsistent with monitored lending. In particular, monitored lending does not necessarily follow refusal to refinance.

The monetary impact of enterprise refinance depends in part on whether it is done by rolling over principal due and/or capitalizing interest, or by providing new cash disbursements. While both methods imply a degree of

softness in enterprise budget constraints, the latter comprises operational financing of known money-losing enterprises, a practice that may determine a lower limit on money supply growth. Whether it does so depends on the pervasiveness and scale of cash refinancing. General refinancing is likely to be the chief reason for differences in inflation and real enterprise credit performance between the advanced and less-advanced transition countries in CEE.

One indicator of refinancing behaviour allowing direct comparison between these country groups is a revealed preference for lending to enterprises with large bank debt or non-performing loans (Berglöf and Roland, 1995, claim this is the case in Hungary). Absent bank and enterprise-level data,[10] a proxy for this indicator can be constructed by comparing lending to enterprises of different owner types (Table 10.1). When we normalize enterprise credit by the owner-type share in value added, we find that, in the advanced transition economies, banks are applying similar treatment to state and new and privatized enterprises. In the Czech Republic, bank credit has been consistently distributed evenly between state and private enterprises. In Poland, a larger share of credit went to state enterprises until 1991. Then credit to private enterprises caught up, and credit has been evenly distributed thereafter. In the less advanced transition economies, however, banks show a strong preference for lending to state enterprises. In Bulgaria and, in the extreme, Romania, the private sector has consistently obtained a lower share than the state sector throughout the transition. However, banks have withdrawn long-term credit from enterprises of all owner types in all these countries.

Other evidence on refinancing behaviour is available from enterprise surveys in the advanced countries. These suggest that, for the most part, banks in these countries have proven capable of withholding new credit from defaulting enterprises. Pinto *et al.* (1993) show that in Poland banks as well as profitable enterprises are refusing to lend to enterprises that are unlikely to be able to repay. Baer and Gray (1995) report that, since early 1993, a sample of seven Polish treasury-owned commercial banks have made no new loans to non-performing enterprises. (Such loans would be illegal under the Law on Financial Restructuring of Enterprises and Banks). Bonin and Schaffer (1994) report less comprehensive evidence that Hungarian banks, while continuing to roll over bad loans and capitalize some unpaid interest, are not offering new money to problem firms on a large scale. Dittus (1994) reports that enterprises place a high priority on servicing commercial bank debt.

In the advanced transition countries, non-performing debt is limited to a small core of non-viable enterprises. Polish and Hungarian enterprises

carry a significant amount of bank debt. However, average ratios of debt to total assets are moderate, while average ratios of bank debt to total assets are low (Baer and Gray, 1995). Most of the loans are held by a small number of enterprises, from particular industrial sectors and regions (Bofinger, 1992). In Poland, 10 per cent of state-owned enterprises account for nearly all of banks' non-performing loans (Gomulka, 1994), while in Hungary bank debt is more evenly spaced among a larger number of firms (Bonin and Schaffer, 1994). This concentration of debt and non-performing loans in a few enterprises in the advanced countries may permit banks to exercise restraint in lending to most enterprises, while still posing a significant threat to aggregate monetary control and credit misallocation.

Money, Outside and Inside

The key difference in bank credit performance between the advanced and less advanced transition countries is the degree to which enterprise refinance is systemic. Recall that refinancing credit is non-discriminatory. An environment that permits extensive enterprise refinance is equivalent to an outside money system with accommodating monetary policy. It will be characterized by periodic bank bailouts and rescue packages that do not conform to deliberate and well-planned recapitalization schemes (see Perotti, 1994b, for evidence of this in Bulgaria and Romania). By contrast, a financial environment that succeeds in containing refinancing behaviour to isolated instances, with limited resort to indiscriminate new cash credit, is equivalent to an inside money system, based on discriminatory lending to enterprises.

The connection between refinancing behaviour and the nature of the monetary system is useful, because it provides a link between individual bank behaviour and aggregate credit performance. Credit creation with outside money is inherently inflationary. Only inside money can create non-inflationary credit. Given the balance sheet relation of commercial banks, inside money creation as real credit to enterprises depends on deposit mobilization. Indeed, one of the key impacts of the transition reforms was to introduce dependence of enterprise credit on demand for deposits: Calvo and Coricelli (1994, 1993) show formally that a regime shift from passive to tight money results in a sharp reduction in real credit to enterprises. However, in their model, accommodating the money supply to the credit needs of individual enterprises would merely create inflation, and reduce overall real enterprise credit. The reason is that in that model real credit is equivalent to outside money.

Maintaining a non-accommodative monetary stance in an outside money system imposes high real costs, for two reasons. First, substantial real enterprise credit is needed to support the restructuring and resource reallocation process. Second, banks may prefer to lend to enterprises that carry a large amount of non-performing debt, in order to avoid writing it off, thereby crowding out credit to viable enterprises (Perotti, 1993). Hence, non-accommodative monetary policy in an outside money system is less likely to be sustainable or, if it is sustained, is costly in real terms. The solution, as argued by Perotti (1994b), is to provide enterprise credit selectively, with real credit backed by inside money, since inside money is built on discriminatory lending backed by deposit mobilization. This selectiveness in lending is the main mechanism by which banks exercise control over enterprises in the transition, and is therefore the essence of the bank role in imposing hard budget constraints on enterprises.

Hard Budget Constraints

That hard enterprise budget constraint as an institution is equivalent to inside money has not been universally perceived in the literature. Both Dittus (1996, 1994) and Baer and Gray (1995) assume that the hard enterprise budget constraints that are indicative of good bank behaviour are demonstrated by declining real credit to enterprises. They assert that declining real credit is evidence of the exercise of bank control over enterprises. Such a view implicitly equates real enterprise credit with outside money, in which case the role of banks is merely to deliver base money to enterprises. During the transition, a developing inside money system, manifested in deposit mobilization, and based on bank discriminatory lending to enterprises, would rather be characterized by growing real credit to enterprises. We argue here that the diverging enterprise credit performance in the advanced and the less advanced transition economies, based on differences in general refinancing behaviour and the corresponding spillover effects onto monetary policy, corresponds to the realization of inside money in the former and outside money in the latter (Perotti, 1994a).

Our final concern is over the impact of hard budget constraints on enterprise restructuring and, in particular, the nature of the resulting incentive to restructure. Our interpretation of hard budget constraints exclusively in terms of the incidence of bank refinancing is incomplete. Hard budget constraints are also affected by the failure of monitored lending, or self-finance. In so far as inside money is based on short-term commercial lending, to the exclusion of long-term or investment finance, it is inherently fragile. That is, the overall transition dynamic, in which resources

are reallocated at the macroeconomic level, is the same for both the advanced and the less advanced transition economies, regardless of the nature of the money system. Whether the money system is an inside or an outside one does matter, in terms of the speed and efficiency with which resources are reallocated (Ruggerone, 1996). However, the transition dynamic itself, similar for both advanced and less advanced countries, does not derive from success or failure in achieving hard budget constraints via an inside money system, but rather from the failure of monitored lending.

Hard budget constraints with self-finance imply that enterprise restructuring occurs by financial distress (Carlin *et al.*, 1995; Pinto *et al.*, 1993). This fosters an arbitrary, backward-looking and defensive posture to enterprise restructuring, in which only enterprises with historical surpluses obtained in the central planning and transition periods can invest. Bank lending is limited to a commercial credit line that cannot support deep restructuring projects involving investment, product development and active marketing strategies. Ultimately, while hard budget constraints based on self-finance can establish monetary stability and defensive restructuring, they do not promote resource reallocation at the enterprise level, within state enterprises. They therefore address the economic duality of transition only indirectly, by altering the rate of change in the shares of the state and private sectors over time.

10.4 MONITORING INCENTIVES

In this section we seek to explain the stylized facts of bank credit performance, namely refinance and self-finance, with reference to the incentives facing individual banks in their lending decisions. We address the failure to achieve monitored lending by identifying disincentives to monitor. These include high monitoring or agency costs, deriving from the diverse incentives that borrowers and lenders have in pursuing the investment project, and perverse incentives to refinance failing enterprises, deriving largely from poor credit policy design. Our discussion of perverse incentives deals with refinancing behaviour directly, but we treat them here primarily as disincentives to monitor lending.

Our coverage of monitoring disincentives is comprehensive. However, that banks have withdrawn from the market for long-term credit in both advanced and less advanced transition economies suggests that it is monitoring costs rather than perverse incentives that currently underlie enterprise self finance. Furthermore, that banks have withdrawn long-term

lending from both state and private enterprises suggests that monitoring costs are not limited to enterprises that require restructuring, or in which insiders retain a strong influence. We therefore direct the discussion to monitoring costs that are common to all types of enterprise owner.[11]

Diverse Incentives of Borrowers

This section focuses on monitoring costs associated with the diverse incentives facing borrowers and lenders. We begin by identifying the sources of such costs, emphasizing those that are distinct to the transition, and then consider how they affect bank lending decisions.

Sources of Monitoring Costs

There are two sources of exceptional agency costs in CEE. The first is the large amount of unsecured outside finance required for enterprise restructuring, which intensifies the diversity in borrower–lender project incentives. The second is severe informational asymmetries, coupled with incomplete lending contracts.

Lending in the transition on the scale required to implement long-term enterprise restructuring projects with investment will consist mostly of unsecured outside finance. This is because enterprise net worth and liquidity are limited relative to the size of the restructuring and investment project. A crude indicator of the capital and financial status of enterprises in CEE is the share of enterprises that continue to make losses. Table 10.4 shows that, five years into the transition, this share remains very high. Low net worth is characteristic of state and new private enterprises alike, although possibly for different reasons. The latter do not need to restructure, but are mostly small- and medium-scale, labour-intensive and family-owned (EBRD, 1995).

Table 10.4 Czech Republic and Poland: share of loss-making enterprises (%)

	1991	*1992*	*1993*	*1994*
Czech Republic	—	32.7	42.8	—
Poland	46.3	49.2	45.3	39.6

Source: National sources as reported by IMF staff.

The impact of the outside finance requirement for monitoring costs in the transition is exceptional for two reasons. First, low enterprise net worth primarily derives not from a debt overhang, as may be the case in developing or industrial countries hit by a systemic macroeconomic, financial or external shock, but from the low value of capital assets realized with the transition shock. Hence, monitoring costs cannot be fully addressed by debt restructuring.[12] Second, to the extent that monitoring costs are negatively correlated with net worth, they will be particularly large in the transition.

Informational asymmetries during the transition are also severe. These derive from the transition reforms themselves, which resulted in a systemic change that reduced the value of prior information; from poorly developed accounting systems and reporting requirements; high tax rates that encourage misrepresentation; weak institutions, including poorly skilled bank employees and bank supervisors, and poor enforcement (Baer and Gray, 1995; Calvo and Kumar, 1994, 1993). These informational asymmetries create a wide scope for secret, non-contractual behaviour on the part of the borrower.

Nature of Monitoring Costs

Monitoring costs come from the diverse incentives borrowers and lenders have in choosing and implementing restructuring and investment projects. The borrower has an ownership or equity stake in the project. If the project succeeds then the borrower gets the full return from the project, less the cost of debt service. If the project fails then the borrower incurs no loss (aside from possible transactions costs), because the debt is unsecured. So, the borrower is primarily concerned with the upside potential of the project, and is inclined to choose riskier projects, or to expend less cost and effort in evaluating the project. The lender, however, has a fixed-return, contractual stake in the project. The lender is therefore conservative in outlook, wishing primarily to protect the project against failure, regardless of the upside potential of the project. The standard Stiglitz and Weiss (1981) framework for assessing monitoring costs is not adequate for the transition economies. In that framework, individual projects have exogenous risk-return characteristics known only to the borrower. The bank's problem is to select the desired project types. Because there is a monotonic relationship between project risk and the macroeconomic interest rate, banks avoid excessively risky projects by rationing credit at below market interest rates. However, a major challenge in the transition is to identify and evaluate viable investment projects (Grosfeld, 1994). It is not

therefore suitable to treat the search for good ideas as a problem of selecting from a pool of projects with given characteristics. Furthermore, real interest rates are low, often negative, suggesting that perverse project selection due to high interest rates cannot explain rationing leading to the complete collapse of the long-term credit market.

It is more appropriate to view the nature of monitoring costs in transition in terms of enterprise failure to engage in costly project identification and evaluation. When informational asymmetries are significant, enterprises have a comparative advantage in project evaluation. The less effort expended on project evaluation, the lower the quality of the project, since it is more likely to fail. Therefore, borrower–lender incentive divergence depends on the expected net return to enterprises to evaluating projects. The lower the enterprise's investment stake in the project, the lower its incentive to evaluate, since the enterprise does not bear the consequences of project failure. The bank incurs the cost of project failure by virtue of the loss of its investment. This analytical framework has been formalized by Bernanke and Gertler (1990), who show that there is a positive correlation between enterprise net worth, and therefore the share of the project financed from internal enterprise savings, and the enterprise's stake in the project. That is, where enterprise net worth is low, and therefore investment co-financing is limited, bank monitoring costs will be high. When enterprise net worth falls below a critical threshold, bank credit for investment finance may collapse.

Universal Banks

In general, monitoring costs derive from the excessive willingness of enterprises to take risks, by failing to evaluate projects sufficiently. Enterprises would be more conservative, that is, more like banks in outlook, were more of their own capital to be invested in the restructuring project. We emphasized above that this option is largely precluded because of the structurally low net worth of enterprises in the transition. However, there is potentially an alternative approach to reducing the diversity of borrower–lender incentives. That is to make banks less cautious, at least in the sense of being more willing to undertake project evaluation themselves. It could be achieved by giving banks equity stakes in enterprises, and thus an interest in the full project return. In the transition economies, this idea has often been raised in proposals for a universal banking structure (Corbett and Mayer, 1992; Grosfeld, 1994 and references therein).

A universal banking structure has two advantages with respect to monitoring costs. First, as noted above, the bank earns a stake in the upside

potential of the project, and therefore has a greater incentive to monitor or evaluate the project. Second, the bank becomes an insider, gaining increased access to information, as well as rights of discretionary intervention, including residual rights of control over non-contractual enterprise actions.

Universal banks are not, however, a panacea for bank reform in the transition. The increased incentives to monitor projects and to accept higher risk depend for effect on the capacity to monitor and evaluate projects. But banks in transition have limited risk assessment skills and experience. Furthermore, unless the bank becomes like an enterprise, concentrating its investment resources in one enterprise or project, it will have to evaluate or monitor numerous projects. This may spread its scarce resources too thin. For instance, encouraging banks to intervene in defaulting enterprises may mean that fewer resources are available to monitor new lending (Aghion *et al.*, 1994b). In addition, the equity position of the bank in the enterprise may introduce a conflict of interest. If enterprise equity has low value, or the enterprise is not viable, banks may be tempted to extend refinancing credit to avoid writing down its own net worth. This is similar to the effect of non-performing loans on bank balance sheets (see below).

Reformers have encouraged banks to move towards a universal structure by programming voluntary debt–equity swaps into bank recapitalization and enterprise debt restructuring schemes, primarily in Poland (Grosfeld and Roland, 1995; van Wijnbergen, 1992). However, take-up of the option has been disappointing. In the Czech Republic an unforeseen form of universal banking has developed through unregulated trading in secondary equity markets. Investment funds have emerged to diversify equity ownership. The six largest of these are owned by banks, which have a controlling interest in the associated enterprises. However, it remains to be seen whether the banks intend to take an active role in enterprise control. Evidence to date suggests not. In particular, the new equity position of banks in enterprises has not encouraged investment financed with long-term debt.

Dittus (1996) reports from interviews with bank managers on attitudes toward taking equity interests in enterprises. Managers see the enhanced monitoring role as too costly in terms of human capital and management time, yielding a low payoff relative to traditional commercial lending practices. Bank managers have a strong sense of the scarcity of their monitoring resources (which are in any case, they say, better spent on traditional lending). Banks can only effectively control three or four firms. Banks also believe that commercial and investment banking require

completely different skills, and do not want to use their loan officers for restructuring activities. One major Polish bank prefers to invest with a strong partner (ideally foreign) to take care of corporate control. Hence, banks resist taking a direct equity position in enterprises because it would require a greater investment in monitoring activity to protect their interests.

Perverse Incentives of Lenders

Perverse incentives of banks to refinance enterprises unconditionally arise from credit market imperfections and poor policy design. Refinancing incentives raise the opportunity cost of monitoring, and refinancing crowds out loanable funds available for alternative uses. In this section we identify three sources of perverse incentives to refinance. The first is the static effect of a large stock of non-performing loans on bank balance sheets. The second is moral hazard arising from poorly designed or non-credible bank recapitalization programs. The third depends on the hesitance of governments to terminate money-losing enterprises, which can be strategically exploited to the banks' advantage.

Outstanding Non-Performing Loans

The earliest warnings that transitional banks would not be able to resist refinancing enterprises stemmed from the observance that banks carried a large quantity of outstanding non-performing loans on their balance sheets, inherited from pre-transition days (Begg and Portes, 1993; McKinnon, 1993). Many, if not most, of the banks were technically insolvent as a result of these loans. The issues are the same when non-performing loans accumulate again during the transition. They affect both incentives to monitor and incentives to refinance. In the former case, non-performing loans on bank balance sheets immediately reduce the incentive to intervene in defaulting enterprises, because the return to intervention in the form of resumed debt service must be shared with depositors or the deposits guarantor (Aghion *et al.*, 1994b).

In the latter case, refinancing incentives come from the option value of waiting for the enterprise to resume debt service (Perotti, 1993). The option value exists as long as the bank is the residual claimant on the debt and there is a positive probability that the enterprise, through good luck or costly restructuring effort, will one day generate an operational surplus (before debt service). The incentive to refinance also depends on the consequences of failing to refinance, in three respects. First, if it means that the enterprise

will close or be liquidated then the option value of the stock of bad debt will be lost. Second, it may imply loss of reputation, or bring down regulatory sanctions on the bank, which may then be required to undergo its own costly restructuring effort. Finally, the higher is the liquidation value of the enterprise then the lower is the bank's incentive to refinance.

Neutralizing the negative incentive effects of non-performing loans on bank balance sheets requires debt restructuring (Begg and Portes, 1993). To be effective, such schemes must be large enough to reduce problem loans below a critical incentive threshold. Some of the bank recapitalization programmes in CEE, described briefly below, may have been insufficiently comprehensive for this purpose, and therefore partly to blame for the resurgence of non-performing loans in some countries (Aghion *et al.*, 1994b). Partial recapitalization programmes were implemented in Bulgaria and the former Czechoslovakia and Poland, usually by specifying a cut-off date for eligible loans.

Recapitalization Schemes

Each of the advanced transition economies has initiated bank recapitalization schemes designed to deal with non-performing loans. However, many of these schemes are poorly designed, offered without conditions attached and without a convincing commitment not to recapitalize again in the future. They thus introduce a moral hazard incentive for banks to refinance enterprises. The anticipation of an unconditional bailout is like a loan guarantee, which removes any incentive for costly monitoring. This reduces the quality of projects financed, and the quality of the loan portfolio over time, thus raising the level of debt restructuring required (Aghion *et al.*, 1994b).

The anticipation of a bank bailout is strengthened when they occur repeatedly. Hungarian banks have been recapitalized four times, once each year between 1991 and 1994. These schemes varied slightly in their details. Early ones depended on loan guarantees, while the later ones employed swaps with government bonds to raise capital asset ratios. In all cases bank recapitalization was to a large extent unconditional. In Poland, by contrast, bank recapitalization was conditioned on conciliation agreements being reached between banks and defaulting enterprises. Bank managers were actively discouraged from making new loans to problem debtors, with an outright prohibition eventually enacted into law. The law also required banks to set up workout departments and to take actions to resolve those loans that had been classified as non-performing at the end of 1991. Treasury-owned banks underwent repeated portfolio evaluations by outside auditors, and had to create management information systems.

Recapitalization also included a plan to privatize the 9 treasury-owned banks. So far, 3 have been transferred to private hands. Poland shows the least evidence of refinancing behaviour of all the transition economies.

Strategic Behaviour

Even when there is no intrinsic incentive for banks to refinance non-viable enterprises, stemming either from an outstanding stock of non-performing loans or from the moral hazard effects of recapitalization programmes, banks may wish to exploit the government's own unwillingness to close enterprises (Berglöf and Roland, 1995). Banks may therefore commit capital to enterprises beyond their own lending capabilities. If such a capital commitment is a sunk cost *ex post* then the government will be forced to bail out the bank to rescue the enterprise. In this way, the bank forces the government to bear some of the cost of refinancing the enterprise. The potential for strategic behaviour by the bank depends on the level of bank liquidity, the quality of the loan portfolio and the degree of undercapitalization of the bank.

10.5 EXPLAINING BANK BEHAVIOUR

Having examined both disincentives to provide monitored investment finance and incentives to refinance defaulting enterprises facing banks, we now take an overall view of the combined impact of these incentive structures on bank refinance and self finance lending behaviour and the resulting transition dynamic. In particular, we attempt to explain both the general withdrawal of banks from the market for long-term credit in all transition economies in CEE, and the different monetary outcomes stemming from refinancing behaviour in the advanced and the less advanced transition economies. We begin by treating the hesitance of banks to intervene to liquidate or reorganize defaulting enterprises. We then discuss the alternatives to failing to intervene, namely refinancing the enterprise or withdrawing. Finally, we address the feedback effects of the withdrawal from long-term lending on the refinancing decision, and call on these effects to explain differences in monetary outcomes and the hardness of budget constraints.

Liquidating Enterprises

Banks do not, in general, intervene to liquidate or reorganize enterprises that are not servicing their debts. This is due in part to high transactions

costs, including lengthy and costly court procedures, relative to the effective value of collateral or liquidation. More importantly, however, is the option value of the non-performing loans to the bank, deriving from a variety of sources, as already discussed. Writing off the problem loans puts to an end any possibility that a positive event affecting enterprise liquidity will enable the enterprise to resume debt service. For example, distressed enterprises may shrink to a profitable core, making waiting a reasonable strategy. Or, waiting may pay off in the event of a government bailout of the enterprise or the bank. Even when there is no hope that debt service will be resumed, and the enterprise cannot survive without refinancing, banks may simply abandon the enterprise when the liquidation value is low, rather than pay the transactions costs associated with liquidating it through the court system.

We are primarily interested in the behaviour of banks when they choose not to liquidate defaulting enterprises. If perverse incentives arising from poorly designed recapitalization schemes and government unwillingness to see enterprises terminated are strong then banks will tend to refinance such enterprises. These incentives are similar to moral hazard arising from government loan guarantees. In those circumstances, refinance is viewed as an alternative to monitored lending, a relationship we return to later. In the following paragraphs, however, we analyse refinance as an alternative to liquidation.

Liquidating versus Refinancing Enterprises

For Perotti (1993), who formally analyses the option value of non-performing debt on bank balance sheets, the only alternative to liquidation is refinancing. This linkage between liquidation and refinancing is based on the implicit assumption that, in the absence of refinancing, the enterprise will fail. However, in CEE enterprise liquidation or closure due to the pressure of market forces is rare. Furthermore, refinancing may itself introduce moral hazard into the enterprises' incentive structure, and increase the static disincentive to restructure because part of the reward accrues to the bank. Hence, having decided not to liquidate a defaulting enterprise, the bank will be less likely to refinance the enterprise if it is probable that the enterprise will survive without refinancing. Conversely, banks will be less willing to liquidate the enterprise if the alternative does not require refinancing to keep the enterprise alive. The crucial issue is separability of the liquidation and refinancing decision (see below), which is related to the probability of shutdown, or, equivalently, the probability of shrinking to a profitable

core as a result of financial distress following from bank-imposed self-finance.

A major implication of the separability of the decision to liquidate or refinance enterprises is that the option value to the bank of non-performing loans is retained even without refinance. Hence, with separability, there is no intrinsic incentive for the bank to refinance. The bank can merely cut off the enterprise from further credit, and put loanable funds to alternative uses. This adjustment via financial distress may be cheaper for banks than either direct intervention or new monitored lending, because it enables the bank to pass monitoring or restructuring costs on to the enterprise because banks compete with each other and with foreign banks, they do not take into account the aggregate effects of their decisions not to intervene actively in enterprises. These aggregate effects include the failure of enterprises to undertake deep, forward-looking restructuring with investment, with the result that the overall transition follows a sectoral resource reallocation pattern.

If failing to liquidate requires refinancing, then monitored lending will be crowded out, unless monitoring costs are so high that the alternative to refinancing is withdrawal. However, liquidation and debt write-off may require provisioning to meet capital adequacy requirements, which would also crowd out monitored lending.

The separability of the decision to liquidate or refinance depends on at least two things. First, it depends on the flexibility of production technology and organization, at both enterprise and aggregate levels. At the enterprise level, production flexibility entails the ability to separate money-losing production units from profitable units, and organizational flexibility entails the ability to prevent adversely affected employees from building protective coalitions. Such flexibility is necessary for an enterprise in need of restructuring to become profitable (Aghion *et al.*, 1994a). At the aggregate level, production rigidity, determined by a core of money-losing enterprises that cannot adjust, may cause even viable enterprises to bet on a general bailout, and therefore to collude with non-viable ones by extending inter-enterprise credit and accumulating inter-enterprise arrears (Perotti, 1994b). This, in turn, increases the cost to the government of refusing a bailout by implicating non-viable and viable enterprises, as well as creditor banks, alike. The less advanced transition economies, Bulgaria and Romania, have more rigid production arrangements at both enterprise and aggregate levels than do the advanced transition economies (Bruno, 1992; Perotti, 1994b).

Second, the separability of the decision to liquidate or refinance depends on whether defaulting enterprises can find operational subsidies

elsewhere. If so, banks can pass on the cost of refinancing enterprises to government, primarily via accumulation of tax arrears. This is also an example of the banks exploiting the soft attitude of government to enterprise termination, although it does not depend on strategic bank behaviour. On government's role in supporting enterprises, Schaffer (1995) reports that fiscal subsidies have shrunk significantly since the transition, and are now small in the aggregate at between 3 and 5 per cent of GDP (Table 10.5). Furthermore, the remaining subsidies are highly sector-specific, with almost none in manufacturing. However, tax arrears are significant, and are growing at an annual rate of two percentage points of GDP (one or two percentage points in manufacturing). Since most tax

Table 10.5 Czechoslovakia, Czech Republic, Slovakia, Hungary and Poland: government expenditures, subsidies, and arrears (% of GDP)

		1986	*1992*	*1993*
Czechoslovakia	General government	65.9	60.1	—
		25.4	5.0	—
	Subsidies	—	—	—
	Fiscal arrears			
Czech Republic	General government	—	47.5	47.5
		—	5.0	4.4
	Subsidies	—	2.0	4.0
	Fiscal arrears			
Slovak Republic:	General government	—	64.0	55.1
		—	5.4	4.8
	Subsidies	—	—	5.4
	Fiscal arrears			
Hungary	General government	65.9	63.4	60.5
		25.4	5.8	4.8
	Subsidies	—	5.8	6.9
	Fiscal arrears			
Poland	General government	49.7	50.7	48.4
		16.3	3.3	2.5
	Subsidies	—	3.8	4.6
	Fiscal arrears			

Note: Fiscal arrears are tax and social security arrears.

Source: Schaffer (1995).

arrears will not be recovered, they are a non-cash fiscal subsidy. Tax arrears tend to be concentrated in a small number of financially distressed enterprises in the advanced transition economies. Recall that fiscal subsidies do not have direct monetary implications, in contrast to credit subsidies provided through unconditional refinancing, which may prevail in the less-advanced transition economies.

Even without refinancing, choosing not to liquidate has adverse consequences for bank behaviour. Problem loans remain on the books, reducing the incentive to restructure at the enterprise level, and to monitor at the bank level. They also increase the incentive for strategic behaviour by banks (Berglöf and Roland, 1995). As noted above, poor recapitalization policy will in addition raise the incentive to refinance as an alternative to monitored lending, rather than as an alternative to liquidation.

Cutting off versus Refinancing Enterprises

If monitoring costs are very high then banks may withdraw from the market for long-term credit, regardless of recapitalization programme design or separability of the liquidate or refinance decision. However, the effective impact of monitoring costs on monitoring behaviour depends on the return to alternative uses. Relevant alternative uses of loanable funds are those that do not require monitoring, including commercial lending, purchases of government bonds, and lending that is effectively guaranteed by government recapitalization policy or a soft government attitude to bank budget constraints. That is, as noted earlier, perverse incentives to refinance are also disincentives to monitor.

At the same time, monitoring costs leading to a general bank withdrawal from long-term investment finance affects incentives to refinance through its aggregate effect on the economy. In particular, self-finance ensures that the reallocation of resources that defines the transition will occur between state and private enterprise sectors, rather than within enterprises. The transfer of resources entails the slow decline of the state enterprise sector and growth of the new private sector (Aghion and Blanchard, 1994). The success of this model requires coordinated speed of adjustment in the respective sectors, depending on the size of the productivity differential between the two sectors and on various constraints on the resource transfer of a political or fiscal nature, or arising from imperfect operation of aggregate markets, especially the labour market (Chadha and Coricelli, 1994; Rodrik, 1995).

Very little is known about the determinants of the speed of adjustment in the two sectors when capital markets are absent. However, it appears

that it depends greatly on the inherent dynamism of the new private sector and production rigidities in the state sector, both stemming from structural conditions and features of the economy present at the beginning of the transition (Bruno, 1992; Johnson and Loveman, 1994). When, as in the less advanced countries of the transition, the initial private sector is small and underdeveloped and production in the state enterprise sector is rigid both within enterprises and in the aggregate, the resource transfer process will be slow. This in turn increases enterprise incentives to collude, and decreases the incentive for government to adopt a hard attitude to enterprise termination.

With a more rigid production structure, and limited dynamism in the private sector in the less advanced transition economies, then, the alternative to failing to refinance enterprises is a greater likelihood of enterprise shutdown. That is, in the less advanced countries, the bank decision to liquidate or to refinance the enterprise is not in general separable. In the advanced transition economies, by contrast, production structures, at both the enterprise and sectoral levels, are more flexible, and self-finance is a viable option. Hence, the former countries are likely to experience greater incidence of refinancing behaviour, and show greater spillover effects onto monetary policy. We believe that this may be the main explanation for the achievement of inside money systems in the advanced transition economies of CEE and the retention of outside money systems in the less advanced transition economies. Furthermore, the achievement of an inside money system itself affects the speed of transition in the macroeconomic adjustment model.

10.6 CONCLUSION

In this chapter we have examined the role banks have played thus far in the transition to a market economy in CEE. Our approach has been to identify the main aspects of bank lending to enterprises during the transition, and to explain that performance with respect to bank incentives to monitor lending. We conclude that banks have played a more important role in the transition than generally recognized, given the preoccupation of the literature with enterprise privatization. However, that role has been a largely reactive and unintended one, stemming primarily from the failure to provide long-term investment finance leading to a macroeconomic resource reallocation model. In such an environment, where capital markets are absent, the ability of banks to establish an inside money system and a hard budget constraint regime, crucial to the success of the

macroeconomic transition model, itself depends in part on structural givens of the economy.

The crucial issue regarding the bank role in the transition is whether monitoring costs leading to collapse of the market for long-term credit are a structural feature of transition economies, or whether they are responsive to policy. Indeed, some disturbing implications of the fact that long-term credit withdrawal is common to all the transition countries, even though financial policy and monetary performance differ, are that perverse incentives are not the primary source of the failure to monitor, and that monitoring costs are a structural feature of transition, and cannot be addressed by policy. If this is so then banks can have only a marginal role in the transition, restricted at best to imposing self-finance on enterprises and thus supporting the sectoral adjustment model. At worst, if for structural reasons a sectoral adjustment model is not feasible, as may be the case for the less advanced countries, then banks will not even be able to impose self-finance on enterprises, and the system reverts to outside money one with centralized allocation of credit.

In addition to perverse incentives to refinance, we have identified low enterprise net worth stemming from low asset values and severe information asymmetries as the primary sources of high monitoring costs in transition economies. These sources, and the contributions of poor credit policy leading to perverse incentives to refinance, are likely to vary in intensity across countries. Nevertheless, if these critical factors fall below the critical threshold then banks will withdraw long-term credit in all the countries. Hence, the suggestion in the previous paragraph that monitoring costs are impervious to policy may be overly pessimistic. We therefore offer the following policy recommendations, which are divisible into two parts: those intended to eliminate perverse incentives and those intended to reduce monitoring costs directly.

First, there are measures to deal with the outstanding stock of non-performing loans. This has been the subject of a great literature, and will not be dwelt on here. It is essential to remove the moral hazard effect of such measures, which act as a guarantee on lending, and therefore a disincentive to monitoring. Such schemes should be sufficiently comprehensive, not repeated, and conditional on bank behaviour. Conditionality may include changing bank management, and investing in monitoring or investment banking capabilities. Bank recapitalization should occur before the government eliminates fiscal subsidies and otherwise hardens its own attitude toward enterprise termination, and before measures to increase the liquidation value of enterprises, such as streamlining procedures and raising the seniority of bank claims. This is so as not to increase the net

refinancing incentive associated with the option value of problem loans by reducing the separability between the liquidation and refinancing decisions.

Second, there are measures to reduce monitoring costs. These include measures to reduce informational asymmetries, such as more adequate accounting systems and disclosure requirements, and transactions costs, such as reforming legislation governing use of collateral, involving the effective seniority of bank claims. In addition, the government may provide incentives or assistance in upgrading the monitoring capabilities of banks. It may be useful to centralize arrears collection and enterprise liquidation in a state agency, to avoid spreading bank monitoring and intervention resources too thin.

The role of venture capital should be enhanced (Grosfeld and Roland, 1995), ideally in partnership with bank-based investment finance. Venture capital would concentrate personnel skilled in long-term credit issues, specialize in monitoring capabilities, and play a role in numerous enterprises, with financing supplemented by bank resources. This is the role played by the European Bank for Reconstruction and Development, which provides counterpart financing to enterprises, thereby raising effective enterprise net worth and lowering monitoring costs as far as banks are concerned. However, the agency providing the counterpart funds for the enterprise would have to have the incentive and capability to monitor the project, and thus play the part of the enterprise's stake in the project. This may then release long-term bank credit.

Further research should focus on the potential for a more proactive role for banks in the transition, by inquiring some more into the nature of agency costs in transition. A particularly interesting question is whether monitoring costs differ by enterprise ownership type. As noted earlier, present evidence suggests not: banks are not lending long-term to either state or new private enterprises. However, given that state enterprises are largely owned or controlled by insiders, it is not clear that insiders will borrow to invest in a restructuring project and accept bank monitoring even if such lending were available. The answer to this question implicates both the sequencing of policy as between bank reform and privatization, and potential differences in policy approaches toward obtaining monitored lending to state or new privatized enterprises. If so, bank lending may be a substitute for failed privatization. It would also be worth while to pursue this issue with respect to the role of banks in the source of persistent productivity differentials during the transition. Is the absence of bank-based investment finance the binding constraint on enterprise-level restructuring?

Notes

1. Thanks to José María Fanelli and Rohinton Medhora for helpful comments on earlier drafts.
2. The countries studied in this chapter are Bulgaria, the Czech and Slovak Republics (formerly Czechoslovakia), Hungary, Poland and Romania.
3. Borensztein and Montiel (1991) estimate on the basis of world prices that at the time of the reform shock, between 50 and 75 per cent of the inherited capital stock in Czechoslovakia, Hungary and Poland should have been written off. Sinn and Sinn (1992) calculate that under West German accounting rules between 50 and 66 per cent of the capital stock of East Germany at reunification would be written off. Hughes and Hare (1994) estimate that at the beginning of the transition, with immobile capital, between 20 and 25 per cent of production in the tradable industry sectors of Bulgaria, Czechoslovakia and Hungary (3.5 per cent in Poland) added negative value to output measured at world prices. The *Financial Times*, 21 November 1995, reports that between 70 and 80 per cent of the enterprises in CEE are insolvent by Western accounting standards.
4. See Berg (1994) for a discussion and evidence of macroeconomic resource misallocation in CEE.
5. In this chapter the term 'state enterprise' refers to enterprise ownership at the beginning of the transition, unless otherwise specified. Hence, it includes enterprises privatized during the transition.
6. Transition countries are often ranked by the depth of their transition reforms (EBRD, 1994, 1995). The advanced countries in CEE are the Czech Republic, Hungary and Poland. The less advanced ones are Bulgaria and Romania.
7. Berg (1994), disagrees, arguing that a sectoral resource transfer pattern from state to private enterprises will eventually eliminate resource misallocation. However, he does not account for endogenous changes in the productivity differential through this process, nor for macroeconomic constraints (fiscal and political) on the transfer process (Chadha and Coricelli, 1994; Rodrik, 1995).
8. See Thorne (1993), for a detailed account of bank reform measures in CEE.
9. It is not easy to compare the quantity of non-performing loans across countries, because of differences in accounting systems and classification and disclosure rules. For example, there is a substantial difference in the reported share of non-performing loans in Hungary in 1993 before and after a change in loan classification rules. Also, the economic significance of the non-performing loans is not apparent from these data, because of differences in bank capitalization and provisioning. Finally, assessing data over time is hard, because the rules change. However, abrupt shifts in the share of loans that are non-performing or persistent trends, combined with survey evidence (reported in a later section) are informative.
10. Thorne (1993), provides evidence that private banks prefer to lend to private enterprises.
11. Aghion *et al.* (1994a) and Blanchard and Aghion (1996) discuss insider resistance to privatization, which may have a counterpart in monitoring costs. This is a promising area for future research; see the conclusion.

12. Debt consolidation is relevant to monitoring costs, however, since the inherited debt stock is a disincentive to enterprise managers to embark on costly restructuring, as some of the return accrues to the creditor.

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11 Microeconomic Elements and Perspectives from Finance Theory

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11.1 INTRODUCTION

The current trend toward the restructuring of financial systems in many countries makes an evaluation of the economic merits of alternative financial systems timely and important. This chapter examines microeconomic aspects of financial liberalization, paying attention to the range of market and non-market institutions composing the financial system and the impact of financial liberalization on real investment decisions. The discussion is also tied to the liberalization experience of the sample of countries studied in this volume.

The financial system consists of institutions that facilitate the saving–investment process; it includes not only financial intermediaries, markets and instruments, but also the legal mechanism for enforcing contracts and resolving disputes (for example, corporate bankruptcy laws), regulations governing financial transactions and reducing fraud (for example, disclosure rules), the accounting system and the tax system. McKinnon (1973) and Shaw (1973) have argued that there is a positive association between financial development and economic growth, and that a regime of financial repression, involving such policies as government controls on interest rates, or direct controls on credit allocation, tends to retard financial development and economic growth.

Recently, King and Levine (1993) have tested the hypothesis that financial deepening induces growth using data on 80 countries over the period 1960–89. They show that various measures of financial development are strongly associated with real per capita GDP growth, the rate of physical capital accumulation, and improvements in the efficiency in which economies employ physical capital. They also show that financial development is a good predictor of future rates of economic growth, physical capital accumulation and economic efficiency improvements.

The measures of financial development employed by King and Levine include the ratio of liquid liabilities to GDP (a measure of the size of the financial intermediary system), as well as several other indicators of the relative importance of specific institutions in the financial intermediation process. De Gregorio and Guidotti (1995) also examine the relationship between economic growth and financial development, using the ratio of bank credit to the private sector to GDP as the measure of financial development. They find that financial development is positively associated with long-run growth of real per capita GDP, and that the effect is particularly pronounced for middle and low-income countries.[2] They also find a negative relationship between financial development and economic growth for Latin American countries and explain this, 'in light of the extreme experiments of financial liberalization that were witnessed by Latin America during the 1970s and 1980s, and which subsequently collapsed'.[3] Odedokun (1996) examines data for 71 countries spanning the 1960s to 1980s, and also shows that financial intermediation promotes economic growth. Missing from these studies, however, are separate measures of the development of stock and bond markets, as well as of the accounting, regulatory and legal systems. All of these could have an important bearing on financial development and growth. Still unresolved issues in the literature concern causality, whether the relationship proceeds from financial development to growth or in the reverse way, or both, as well as the underlying microeconomic channels via which financial development affects growth.

From a theoretical perspective, finance tends to matter for real economic decisions when there are missing or incomplete markets due to transaction costs and asymmetric information – that is, outside a Miller–Modigliani world. In incomplete markets there tend to be interactions between real and financial decisions of households and firms, and the level of financial development or deepening will have a bearing on economic growth. Improved efficiencies from financial development – as the scale and scope of transactions via capital markets and financial intermediaries increase – are expected to accrue from better coordination of savings and investments, better monitoring and screening of investment projects, improved mechanisms for effecting corporate control transactions and enhanced scope for value-maximizing decisions by firms, greater competition and risk diversification, the lowering of the market price of risk, and reduced reliance on informal financial markets.

To understand better the impact of financial liberalization on real investment decisions and growth, it is important to identify the channels through which interactions between real and financial decisions occur, and the

impact of financial liberalization on these channels. Underlying these interactions are incentive problems facing individual agents and firms due to moral hazard and adverse selection, bankruptcy and recontracting problems, tax factors, as well as broader informational problems pertaining to systemic risks.

Critical to any discussion of financial liberalization and of the merits of a more market-based financial system are the roles of financial contracts and institutions in overcoming adverse incentive problems, and the informational role of security prices for efficiently coordinating saving and real investment decisions. A related issue concerns financing problems of individual firms. While developing country firms are in many ways like their counterparts in developed economies, variations in institutional environments – legal, accounting, tax, regulatory and macroeconomic – may generate differences in financing patterns of firms across economies. In assessing financial liberalization policies in developing countries, it is important to understand the nature of financing problems facing firms in such countries, because financial constraints on firms have an important bearing on investment and growth.

Among important differences in the constraints governing decisions of firms in developing and developed countries are the following: developing country firms typically are less diversified and have less access to security markets for arm's-length financing, while these markets tend to be informationally less efficient; they also have less access to institutions and instruments for managing risks, and face a less developed and more unstable institutional infrastructure, for example the legal system, the bankruptcy code, and prudential regulations in banking. Restricted access to security markets causes greater reliance by developing country firms on retentions and bank borrowing; this, in turn, makes their investment activity more strongly dependent on past earnings and on the business cycle. Given the inadequate institutional infrastructure, a policy of rapid market deregulation in developing countries can create systemic risks[4] and seriously aggravate the economic performance of firms, as illustrated by the experiences of Argentina, Chile and Uruguay in the 1970s.

Limited risk diversification opportunities for investors in developing countries make corporate control an important objective for some investors. Thus, firms in many developing countries seem reluctant to list publicly in order to preserve owner control, and avoid disclosure rules, as in India where family ownership is common. Public policy measures have tried to reduce corporate control in many developing countries, as in Mexico where publicly listed and widely held shares are exempt from

capital gains taxes, and in India where widely held companies are subject to a lower corporate tax rate.[5] With financial liberalization, and improved opportunities for domestic and international risk diversification, control goals may become less significant. Lack of diversification opportunities in developing economies may also aggravate agency conflicts with managers of firms, leading to suboptimal investment decisions. With financial liberalization, corporate take-over transactions may become easier, reducing agency problems and increasing the scope for value-maximizing investment decisions by firms.[6]

Financial liberalization involves complicated questions of institutional choice, and entails much more than the deregulation of market interest rates or the removal of direct government controls on credit allocation. Efficient financial liberalization probably dictates the removal of restrictions on market transactions at one level, and the simultaneous imposition of new regulatory and legal provisions at another level. While it is possible to study financial liberalization by examining each separate part of the financial system, one should not lose sight of the interdependence of the parts forming the whole structure. Judging from the experiences of countries studied in this volume, as well as other countries, there is no clear-cut recipe for efficient financial liberalization; what is efficient tends to depend on a host of initial conditions prevailing in each country at the time of liberalization. There are, nevertheless, strong reasons for believing that institutional factors such as the legal infrastructure, bankruptcy code, accounting, disclosure and prudential regulations are all important for fostering the operation of financial markets and capturing any ensuing efficiency gains, and should be central elements in the process of financial liberalization.

A major difficulty in discussing financial liberalization stems from the fact that the notions of liberalization, or repression, are vague and do not clearly differentiate between, on the one hand, regulations and institutional schemes that hinder the efficient functioning of markets and, on the other, those that sustain the operation of markets and overcome market failures.[7] Furthermore, given the fact that initial institutional structures, and transaction costs, tend to differ across countries, what might be restrictions on efficient market transactions in one country may serve to correct market failures in another.[8] Also, the absence of one set of institutions or regulations in an economy may make others more important. For example, in the absence of a well-functioning legal infrastructure to enforce financial contracts, the banking system may perform an important role in overcoming incentive and information problems. Or, government controls on interest

rates and bank credit may be efficient, at least for a while, in overcoming adverse selection problems under asymmetric information.[9]

One important lesson that emerges from the liberalization experiences of some of the countries discussed in this volume is that the relaxation of restrictions on financial markets without adequate regulatory and institutional infrastructure may engender serious financial crises, leading to a reduction rather than an increase in financial deepening.[10] A related issue pertains to the optimal timing, or sequencing, of liberalization schemes.[11] The experiences of some of the countries studied in this volume illustrate the importance of sequencing. India instituted financial liberalization schemes gradually (for instance, liberalizing the internal financial sector before the external one), and this approach has probably enabled it to avoid major macroeconomic crises. In Argentina and Uruguay, on the other hand, sequencing considerations were ignored (for instance, internal and external liberalization schemes were brought in simultaneously), which probably contributed to the financial and macroeconomic crises in these countries.

The remainder of the chapter is organized as follows. Section 11.2 discusses the economic function of the financial system, the information aggregation role of financial markets, and the problems of 'noise' and systemic risks in financial markets. Sections 11.3 and 11.4 discuss the issue of optimal financing of firms, and the interaction between financial and production decisions, taking into account the effects of taxes, legal infrastructure, and the bankruptcy code. It is shown that tax codes in many developing economies encourage borrowing, which in the absence of strong regulatory and legal safeguards makes firms more vulnerable to bankruptcy risks, possibly increasing the financial fragility of the economy.[12] Section 11.5 discusses incentive problems due to asymmetric information as a further channel in the interaction between financial and production decisions of firms in developing economies. It also discusses institutional responses to incentive, informational and systemic risk problems in developing economies. The discussion ranges from the choice between market-based and bank-based financial systems, to the role of prudential regulations in facilitating the process of liberalization and the viability of financial markets in developing economies. Section 11.6 briefly compares patterns of firm financing for a sample of developed and developing economies. Section 11.7 highlights the liberalization experiences of the five economies surveyed in this book, while Section 11.8 draws some general policy implications from the previous discussion. Section 11.9 concludes the chapter.

11.2 THE ECONOMIC FUNCTION OF THE FINANCIAL SYSTEM AND MARKET EFFICIENCY

The financial system allows the economy to respond to the problems raised by time and uncertainty. Financial markets provide for the coordination of intertemporal choices of households and firms, as well as for risk-sharing and risk diversification. A distinguishing feature of financial transactions is that the ultimate objects of choice are not perfectly synchronized, so that current goods exchange for promises and claims to future goods. Uncertainty attaches not only to the occurrence of future states of nature, but also to whether promises will be kept, and therefore the design of contract terms which induce performance is highly important for the financial system.

In a symmetric information environment with zero transaction costs, perfect competition, and no problems of contract enforcement – a perfect market environment – the price of an asset will reflect its so-called fundamental value and will change only when fundamental economic data change. A capital market with asymmetric information, but where prices aggregate information fully, is said to be informationally efficient in that prices of financial claims reflect their fundamental value.

There is a school of thought, going back at least to Keynes, that argues that at least in stock markets prices do not aggregate or communicate information well. Keynes argued that speculative and strategic factors dominate the stock market, and the following often-quoted statement illustrates his view:

> Professional investment may be likened to those newspaper competitions in which the competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole; so that each competitor has to pick, not those faces which he himself finds the prettiest, but those which he thinks likeliest to catch the fancy of the other competitors, all of whom are looking at the problem from the same point of view. It is not a case of choosing those which, to the best of one's judgement, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest. We have reached the third degree where we denote our intelligences to anticipating what average opinion expects the average opinion to be. And there are some, I believe, who practice the fourth, fifth and higher degrees.[13]

Indeed, when expectations are widely divergent, strategic factors may have an important impact on trading, so that market prices of financial assets may provide biased measures of fundamental values. There is ample historical evidence of financial market bubbles that dramatically illustrates divergences between fundamental and market values.[14]

Standard Walrasian models of economic equilibrium stress the constraining role of prices on resource allocation, rather than their informational role. As Grossman (1991) points out:

> In some ways these models treat people like rats in a maze. Prices are like the walls that the rats are bumping into, which produce pain and thus guide them in the right direction. The rats (presumably) do not get statistically useful information about the structure of the maze when they bump into a wall.[15]

Suppose we allow individuals more rationality. Consider a market where an individual's demand for a security depends on her private information about future returns of the security and where it is also common knowledge that others have private information about the security. Individuals may learn about the assessment of others, and about the economic environment from market prices, and such learning in turn induces a revision in their expectations about returns, making the original price no longer a market clearing price, and providing incentives to renegotiate the original price. The process stops when there are no further incentives to renegotiate market prices, and the market attains a rational expectations equilibrium.[16] Significant deviations between market and fundamental values may prevail in such an equilibrium. Furthermore, Grossman and Stiglitz (1980) have also shown that when information is costly to acquire then there will be no equilibrium if prices are fully revealing, because no one would have any incentive to acquire information. But if no one acquires information then prices cannot convey information. On the other hand, if prices are noisy signals, that is, if they are not fully revealing, then an equilibrium will exist where the noisiness of prices (the lack of full revelation) allows individuals to be compensated for the private cost of information acquisition. Of equal importance, however, is that noise may make a financial panic more likely. It is possible, under rational expectations, for a panic (for example, a stock market crash) to result from incorrect inferences made by less informed investors (noise-traders) from non-fundamental price disturbances.[17] This signal extraction problem is also present when there is a bank run, where the negative signal is not market price but other

depositors' withdrawal actions. Such phenomena may lead to systemic risks.[18] It is likely that developing country financial markets tend to have more noise and, as a result, face greater systemic risks than markets in developed economies. The problem of noise may become more severe as financial markets become more internationally integrated, and may have adverse consequences for developing economies – as illustrated by the experiences of emerging markets after the Mexican crisis. Calvo and Mendoza write,

> In the days after the Mexican crash, emerging markets worldwide also fell as the 'Tequila effect' propagated, and global investors reacted to the news on Mexico by suddenly changing their views on the merits of investments in emerging markets... This kind of 'herding' behavior by the global investor does not require any irrational behavior and does not require sophisticated theories to be justified.[19]

Thus, the liberalization of the external financial sector may generate, in a noisy financial environment, large and volatile capital flows; the experience of Argentina after the Mexican crash is one such example.

11.3 TAXATION

We discuss in this and the next two sections the various channels through which financial decisions interact with real investment decisions of firms. We consider the impact of taxes in this section, bankruptcy, and the legal infrastructure in Section 11.4, and adverse incentive problems due to asymmetric information in Section 11.5.

As is well known, in perfect and efficient markets with no taxes or information asymmetries the particular mix of financing used by the firm (issuing stocks, bonds, borrowing from banks) is irrelevant; the form of financing does not affect the firm's overall cost of capital and its incentives governing real investment activity. This is the Modigliani–Miller theorem.[20] While this irrelevance result provides a useful benchmark for analysis, real-world economies are characterized by transaction and bankruptcy costs, taxes and informational problems, so that a firm's financial structure tends to affect its cost of capital and optimal investment decisions. Investment and financing decisions then become interdependent, and the mix of financing used may induce or constrain the growth of firms and of the economy. For example, a standard corporate finance model considers optimal financial structure as the product of the trade-off between

the subsidy inherent in the tax deductibility of interest payments, and the potential bankruptcy costs engendered by debt.

Modigliani and Miller (1963) introduced corporate, but not personal, taxation into their earlier model and showed that the market value of the firm is an increasing function of its debt. This result simply reflects the tax subsidy to borrowing due to the deductibility of interest, because the marginal after-tax cost to the firm of borrowing is less than the debt holder's marginal valuation of debt. Miller (1977) gave a new twist to the tax argument by showing that even with personal taxes on interest income debt is irrelevant to the firm, although the aggregate level of debt outstanding in the economy is relevant. In the Miller model, the marginal debt holder's personal tax rate equals the corporate tax rate, and an individual firm does not capture tax-induced surpluses generated by debt, although these surpluses are captured by inframarginal debt investors. While Miller (1977) assumes that all firms are taxed at the same rate, the subsequent literature has highlighted the fact that the effective corporate tax rate tends to vary across firms and that the marginal after-tax cost of debt to the firm depends not only on the statutory corporate tax rate, but also on potential tax shield substitutes to debt, the risk and probability of bankruptcy of the firm, and tax-loss carry-forward and backward provisions.[21] Such considerations imply that the level of borrowing may well affect a firm's cost of capital and its investment decisions.

A simple expression depicting the tax advantage of debt to firms (under the Miller assumptions) is given by the formula, $1 - [(1 - t_c)\,(1 - t_e)]/(1 - t_d)$, where t_c is the corporate income tax rate and t_e and t_d are the personal tax rates in on equity and interest income, respectively. This measure is used in Table 11.1 to determine the tax advantage of interest income relative to equity income in different economies. The table allows for the fact that equity income accrues in two alternative forms, capital gains and dividends. Note that in most developing countries interest is deductible from business income, and that there are tax-loss carry-forward provisions (but usually no carry-backs).

Tax systems have many features beyond personal and corporate tax rates. They impose limits on certain transactions, may change often and may not be well enforced, especially in developing countries. In addition to the direct effect of taxes on the financing decisions of firms, government tax policy indirectly influences such choices via its effects on the structure of financial markets.[22] In spite of the intricacies of the tax code, it is still useful to look at a general measure of the tax advantage of debt relative to equity for the corporate sector in different economies, using the gains-to-leverage formula given above. While borrowing may have a tax

Table 11.1 Various countries: tax advantage of interest income relative to equity income

Country	Brazil *1995*	India *1995*	Jordan *1995*	South Korea *1995*	Malaysia *1995*	Mexico *1995*	Pakistan *1995*	Thailand *1995*	Turkey *1995*
Corporate tax rate	1.25	0.40	0.55	0.30	0.30	0.34	0.46	0.30	0.25
Highest marginal personal tax rate	0.35	0.40	0.45	0.45	0.32	0.35	0.35	0.37	0.55
Personal capital gains tax rate	0.15	0.20	0.00	0.75	0.00	0.35	0.35	0.00	0.00
Tax rate on personal interest income	0.35	0.40	0.00	0.45	0.32	0.02	0.10	0.37	0.55
Personal tax rate on dividend income	0.35	0.40	0.00	0.22	0.32	0.34	0.10	0.37	0.00
Net interest income per marginal dollar	0.65	0.60	1.00	0.55	0.68	0.98	0.90	0.63	0.45
Net capital gain per marginal dollar	0.64	0.48	0.45	0.18	0.70	0.43	0.35	0.70	0.75
Net dividends per marginal dollar	0.49	0.36	0.45	0.55	0.48	0.44	0.49	0.44	0.75
Tax loss carry-forever (years)	Forever	8	6	5	Forever	5	6	5	5
Marginal tax advantage of interest to dividends	0.25	0.40	0.55	0.00	0.30	0.56	0.46	0.30	–0.36
Marginal tax advantage of interest to capital gains	0.20	0.20	0.55	0.68	–0.03	0.56	0.61	–0.11	–0.36

Table 11.1 (*continued*)

Country	*Zimbabwe 1995*	*USA 1995*	*Argentina 1995*	*Canada 1995*	*France 1995*	*Germany 1995*	*Hungary 1995*	*Japan 1995*	*Nigeria 1995*	*Poland 1995*	*Singapore 1995*	*UK 1995*	*Uruguay 1995*
	0.40	0.35	0.30	0.29	0.33	0.45	0.18	0.38	0.35	0.40	0.27	0.33	0.30
	0.40	0.40	0.30	0.53	0.57	0.53	0.44	0.65	0.30	0.45	0.30	0.40	0.30
	0.20	0.28	0.00	0.40	0.19	0.53	0.10	0.65	0.20	0.45	0.00	0.40	0.00
	0.40	0.40	0.30	0.53	0.57	0.53	0.44	0.20	0.30	0.20	0.30	0.40	0.00
	0.15	0.40	0.00	0.34	0.57	0.53	0.10	0.65	0.30	0.20	0.30	0.40	0.00
	0.60	0.60	0.70	0.47	0.43	0.47	0.56	0.80	0.70	0.80	0.70	0.60	1.00
	0.48	0.47	0.70	0.43	0.54	0.26	0.74	0.22	0.52	0.33	0.73	0.40	0.70
	0.51	0.39	0.70	0.47	0.29	0.26	0.74	0.22	0.46	0.48	0.51	0.40	0.70
	6	15	5	7	5	Forever	5	5	4	3	Forever	Forever	3
	0.15	0.35	0.00	0.00	0.33	0.45	–0.32	0.73	0.35	0.40	0.27	0.33	0.30
	0.20	0.23	0.00	0.09	–0.25	0.45	–0.32	0.73	0.26	0.59	–0.04	0.33	0.30

Source: All data are from Ernst and Young, *International Corporate Tax Guide* (1996), and *International Executive Tax Guide* (1996)

advantage, it increased bankruptcy risk making firms vulnerable to unanticipated changes in demand and cost conditions, especially in economies offering limited opportunities for risk diversification and inadequate institutions governing bankruptcy.[23]

Table 11.1 assumes that the marginal investor is taxed at the highest personal tax rate, and that corporations are taxed at the corporate tax rate stipulated by the tax code, although effective corporate tax rates tend to be lower (note for example that all the countries in Table 11.1 have tax loss carry-forward provisions). The table calculates the after-tax value of a pre-tax dollar channeled to the investor via interest income, dividend income and capital gains income in each country, and determines the tax advantage of debt relative to equity. It shows that debt has a tax advantage over equity in most of the developing countries represented, except Argentina and Turkey. Thus, tax systems in many developing countries seem to encourage borrowing, increasing the vulnerability of firms to systemic shocks such as from abrupt currency devaluation or unanticipated interest rate movements. This may be especially serious for firms (financial and non-financial) in developing economies, because they tend to be less diversified, have less recourse to risk management schemes (such as via forward, futures and option markets), and face inadequately developed institutional infrastructures such as a bankruptcy code and deposit insurance.

Foreign rather than domestic tax rates become relevant for estimates of the tax advantage of debt to a firm when the debt holder lives outside the country. Foreign tax rates may affect corporate financing choices in a climate of increased financial market liberalization and integration. Constraints imposed by the international tax environment on the process of financial liberalization and on the financing decisions of firms are an area that requires future research.[24]

11.4 THE BANKRUPTCY CODE AND THE LEGAL INFRASTRUCTURE

The bankruptcy code provides standard procedures for the process of recontracting between the firm and its creditors. It reduces the transaction costs associated with recontracting in case of default by providing rules for liquidation and reorganization. An efficient bankruptcy code induces liquidation when the going concern value of the firm is less than its liquidation value, and induces reorganization when the reverse is true. The bankruptcy code also serves as a deterrent against opportunistic borrower

conduct. A country's bankruptcy code and legal infrastructure expand the scope for intertemporal exchange agreements by promoting the growth of security markets, and enable firms to obtain arm's-length financing through security markets.[25]

Increased reliance on financial markets requires a well-functioning legal infrastructure, accounting norms and regulations such as disclosure rules, and a bankruptcy code without which not only will the recontracting process have high transaction costs but default risk will be mispriced, leading to socially suboptimal default incentives and investment decisions. Furthermore, significant externalities may be associated with bankruptcy whereby the failure of one firm may engender the failure of others. Financial fragility refers to such externalities. Such systemic risks may affect both the real and the financial sectors. An effective legal and regulatory infrastructure and bankruptcy code may help attenuate such systemic externalities.

Most developing countries lack well-developed and functioning legal infrastructures and bankruptcy codes. As a result, arm's-length financial transactions tend to occur through claims that are simpler to enforce and that do not require highly developed bankruptcy and legal infrastructures such as secured debt; for the same reasons, financing through retentions and bank loans tends to dominate in such economies.

11.5 PROBLEMS OF MORAL HAZARD AND ADVERSE SELECTION

Asymmetric information problems, because of adverse selection and moral hazard, induce interactions between production and financing decisions. For example, when it is difficult to screen borrowers, credit rationing can serve as a mechanism used by lenders to resolve adverse selection.[26] Collateral can also serve a signalling role in such circumstances. A similar problem emerges in corporate financing under asymmetric information when the qualities of firms are unobservable. Myers (1984) argues that a hierarchical pattern of financing, termed a pecking order, serves to signal firm quality in such circumstances. For example, suppose that a firm is considering undertaking a risky investment project when management has information about the quality of the investment that cannot be credibly communicated to the capital market. If in management's view the market undervalues the project then the firm prefers internal over external funds to finance the project. If it must resort to the capital market, it prefers to use debt rather than equity, because fixed-income

securities such as debt provide lower benefits to outside claimants from a successful high-quality project. If, on the other hand, the project is overvalued by the market, then the firm prefers to finance through external equity rather than debt or retained earnings. Under rational expectations, the firm's pattern of financing signals its quality, and a pecking-order equilibrium emerges in which firms prefer internal to external financing, and, in the case of external financing, they prefer debt to equity.

When there are moral hazard problems such as underinvestment incentives resulting from conflicts between debt and equity holders, then features such as protective covenants on debt, call options and conversion options serve to attenuate adverse incentive problems.[27] However, as was argued in the previous section, with ill-developed legal and regulatory infrastructures (which is the case in most developing economies), financial transactions tend to involve instruments that are simpler to enforce such as secured debt; or there may be less reliance on arm's-length transactions and greater reliance on banking, because banks tend to have a comparative advantage in gathering information about potential borrowers and in screening and monitoring borrowers, thus reducing adverse selection and moral hazard problems.[28]

Given the costliness of monitoring bank portfolios by depositors, banking can generate moral hazard problems of its own as banks accept (pursuing the narrow interests of their owner-shareholders) more risk than is optimal for depositors. However, such risk-taking incentives by banks in developing countries may be partially offset by a lack of risk diversification opportunities; with limited risk-diversification opportunities, bank owner-shareholders in developing economies may be less prone to risk taking than those in developed economies. A more serious problem in banking concerns systemic risks, where one bank's failure may trigger (as a result of the signal extraction problem discussed earlier) the failure of other banks. Government deposit insurance or the central bank's acting as a lender of last resort might attenuate these problems, but such insurance schemes create familiar moral hazard problems of their own, which might be overcome by imposing regulations on bank portfolio allocation or by making the price of deposit insurance a function of bank portfolio risk.[29] If the regulatory monitoring and enforcement capacity is lacking for such schemes, as it is in many developing economies, bank risk can perhaps be controlled more efficiently by careful screening of potential banking firms and by restricting entry. If monopoly surpluses can be earned in banking then banks have more to lose if they fail, which reduces incentives to take on excessive risks.[30]

11.6 PATTERNS OF CORPORATE FINANCING IN DEVELOPING AND DEVELOPED ECONOMIES

This section examines and compares patterns of corporate financing for a sample of developing and developed economies. Mayer (1990) has examined financing patterns for eight developed economies for the period 1970–85, using flow-of-funds statements as well as company accounts. The countries are: Canada, Finland, France, Germany, Italy, Japan, the UK and the USA. He observes[31] that retained earnings are the dominant source of financing growth in all these economies; also, that banks are the dominant source of external financing, and that in none of these countries are securities markets a major source of financing new investments. Mayer argues that the heavy reliance on retentions in these countries is because they enable shareholders to maintain control over the company. However, an explanation based on asymmetric information wherein retained earnings are the cheapest form of finance, seems just as plausible.

Singh and Hamid (1992) present data for nine developing economies (India, Jordan, Korea, Malaysia, Mexico, Pakistan, Thailand, Turkey, and Zimbabwe) for the period 1980–8. The observations are for the fifty largest manufacturing firms listed on stock markets in these countries and indicate that, in general, firms in these countries rely more on external financing, and less on retentions than firms in developed economies. The average after-tax retention ratio was less than 50 per cent for the firms in developing economies, which is significantly less than for Mayer's sample of companies in developed economies. The figures also indicate that firms in developing countries financed significantly less of their expansion from internal sources compared with firms in developed economies. For example, for the fifty South Korean corporations, an average of about 15 per cent of growth was financed from retained earnings, about 40 per cent by issuing stock and about 45 per cent by issuing debt.[32]

It may be puzzling that financing through retentions is significantly lower for firms in developing economies than for those in developed economies. One would expect greater reliance on capital markets by firms in developed economies, given the lower transaction costs and informational asymmetries in their markets. It must be remembered, however, that the firms in the Singh and Hamid data are not very representative; the data pertain to the largest (and presumably best-known) fifty corporations in each economy. Such firms have the best access to security markets to obtain financing. Smaller and less well-known firms would presumably be at a disadvantage in getting long-term market financing, and have to rely more on retentions or bank financing. Note, for example, the

predominance of short-term financing in the debt structures of firms in Argentina and the fact that the larger firms were much less dependent on short-term financing than smaller ones.[33] Heavy reliance on retentions and on short-term borrowing, which is likely for the majority of firms in developing countries, tends to make investment activity strongly dependent on past earnings, the business cycle and macroeconomic stability. There is a great need for studies on the determinants of the financing behaviour of firms in developing economies.[34]

11.7 A BRIEF OVERVIEW OF THE LIBERALIZATION EXPERIENCES OF ARGENTINA, INDIA, NIGERIA, TURKEY AND URUGUAY

As can be deduced from the country studies in this volume,[35] the liberalization experiences of Argentina (in 1991), Turkey (in the 1980s) and Uruguay (in the 1970s) were in many ways quite similar. Financial liberalization in these three countries, and especially in Argentina and Uruguay, involved the simultaneous liberalization of the domestic and the external financial sectors; however, in all three cases, regulatory safeguards such as prudential regulations in banking, legal infrastructure, and bankruptcy code, were not very strong. Liberalization in each of these countries involved most if not all of the following: deregulation of interest rates, removal of controls on bank credit allocation, removal of entry prohibitions into banking and increased competition in the financial sector, deregulation of stock markets, and full convertibility of currencies. While liberalization led to financial deepening and had a favourable impact on overall investment and macroeconomic performance for a while, it also increased systemic risks and engulfed these economies into serious episodes of financial crises.

In Argentina and Uruguay, assets and liabilities of the banking system became increasingly dollarized as a result of external financial liberalization, exposing banks and borrowing firms to significant devaluation risks. In Argentina financial liberalization resulted in an increase in the financial leverage of firms, but debt maturity remained short-term. The Mexican crisis triggered a financial crisis in Argentina in 1995, leading to capital outflows and bank runs, and a major economic crisis was avoided through government intervention. The experience of Argentina was similar to that of Chile in 1982; in both instances, the crises could be at least partially attributed to the rapid liberalization of the financial system without an adequately functioning regulatory infrastructure. In Turkey, financial liberal-

ization led to highly volatile stock markets and exchange rate fluctuations, and exposed the financial and real sector to significant systemic risks.

The Indian experience with financial liberalization (in 1991) seems to have been quite different. India followed a gradualist approach, and already had a reasonably well-developed financial sector; along with policies such as the deregulation of interest rates, the easing of entry into the financial intermediary sector, and the deregulation of stock markets, India maintained certain regulatory controls and introduced others to insure the safety and solvency of the financial sector, and to induce further financial market development; while restrictions on international capital flows were eased, they were not removed. The financial liberalization experience in India led to financial deepening and has not been marked by episodes of major financial crisis. Since liberalization, the corporate sector has increased significantly its reliance on external financing, both from rapidly growing, near-banking institutions and from long-term, arm's-length financing in security markets.

The financial liberalization experience of Nigeria (in the 1980s) seems more similar to those of Argentina, Turkey and Uruguay than to that of India. Financial liberalization in Nigeria entailed interest rate deregulation, the easing of controls on sectoral credit allocation, easing of entry into banking, and reduced control on international capital movements. The relaxation of entry into banking, while significantly increasing the number of banks, seems to have affected their quality and resulted in a large number of bank failures. A major problem for Nigeria has been its inadequate legal and regulatory enforcement capacity. Financial reforms have not resulted in financial deepening but instead have generated significant systemic risks, leading to a wave of bankruptcies of financial and non-financial firms.

11.8 SOME GENERAL POLICY IMPLICATIONS

As mentioned earlier, a major difficulty in discussing financial liberalization is due to the fact that the notions of liberalization, or repression, are vague and do not clearly differentiate between regulations and institutional arrangements that restrict the efficient functioning of markets and those that sustain the operation of markets and overcome market failures.[36] Furthermore, because initial institutional structures, and transaction costs, tend to differ across countries, what may be restrictions on efficient market transactions in one country may serve to sustain markets (correct market failures) in another.

We argued that the legal infrastructure, bankruptcy code, accounting and disclosure rules, and prudential regulations are all important for fostering the operation of financial markets and for capturing any ensuing efficiency gains, and should be central elements in the process of financial liberalization. It is, however, difficult to determine the most efficient mix of institutions and regulations for sustaining the saving–investment process for any specific economy. The absence of one set of institutions in an economy may make others more important. For example, in the absence of a well-functioning legal infrastructure to enforce financial contracts, the banking system performs an important role in overcoming incentive and information problems. Or, if the regulatory capacity for deposit insurance is lacking, as it is in many developing countries, then bank risk can perhaps be more efficiently controlled by screening potential banking firms and restricting entry. This way monopoly surpluses can be earned in banking, reducing banks' incentives to take on excessive risks. As another example, consider a market environment with asymmetric information; government controls on interest rates and bank credit may be efficient, at least for a while, in overcoming adverse selection problems.[37] This is illustrated by the experiences of South Korea and some other East Asian countries, where interest rate ceilings and government direct credit controls seem to have enhanced the operation of the financial system and economic development for a while; however, in other economies such regulations on the financial system have created inefficiencies.

An important policy lesson that emerges from the discussions in the previous sections is that the relaxation of restrictions on financial markets without adequate legal, accounting and regulatory institutions, and insurance markets, may engender serious financial crises, leading to a reduction rather than an increase in financial deepening. This is illustrated by the liberalization experiences of Argentina, Chile, Nigeria, Turkey and Uruguay.

11.9 CONCLUSION

This chapter has argued that in order to assess financial liberalization policies in developing countries it is important to understand the nature of financing problems facing firms in such countries, because financial constraints on firms have an important bearing on investment and growth. The chapter has stressed the importance of legal, accounting and regulatory infrastructures for the process of financial liberalization. It also argued that there is no clear-cut recipe for efficient financial liberalization. What is

efficient will tend to depend on a country's initial institutional structure and transaction costs. Among important areas for future research suggested by this chapter are the following: an examination of the determinants of financing decisions of firms in developing economies; the impact of financial liberalization on agency problems and governance structures of firms in developing economies; constraints imposed by the domestic and international tax environment on the process of financial liberalization; the informational efficiency of financial markets in developing economies; the nature of systemic risks in a liberalized financial environment and the efficiency of alternative mechanisms for controlling such risks.

Notes

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2. De Gregorio and Guidotti argue that 'the weak relationship observed in high-income countries is due to the fact that financial development occurs to a large extent outside the banking system, while our proxy for financial development focuses on banking sector development' (p. 434).
3. Ibid., p. 434.
4. Davis (1992) uses the term systemic risk 'to describe a disturbance in financial markets which entails unanticipated changes in prices and quantities in credit or asset markets, which lead to a danger of failure of financial firms, and which in turn threatens to spread so as to disrupt the payments mechanism and capacity of the financial system to allocate capital' (p. 117).
5. See Glen and Pinto (1994).
6. However, corporate take-over transactions in a stock market economy may not necessarily induce efficient investment decisions by the firm when there are problems of asymmetric information or free-rider problems. See Grossman and Hart (1980) and Stiglitz (1991).
7. This point is recognized by several writers, including Gibson and Tsakalotos (1994).
8. This is an implication of the theory of second best.
9. This policy seems to have worked in some East Asian countries, such as South Korea, but failed in others.

10. In fact, Diaz-Alejandro (1985) has argued that financial liberalization can reduce the efficiency and increase the instability of financial markets. Akyuz (1994) points to the hazards of financial liberalization and the need for judicious government intervention.
11. McKinnon (1991) has argued that, 'Governments cannot, and perhaps should not, undertake all liberalizing measures simultaneously. Instead, there is an "optimal" order of economic liberalization, which may vary for different liberalizing economies depending on their initial conditions ...' (p. 4).
12. The term 'financial fragility' is usually used to refer to the externalities generated by bankruptcy. Thus, Davis (1992) writes,

    > especially when default is widespread and involves households and large businesses as well as small businesses, all of these analyses may be guilty of taking a partial view (of an agent or firm in isolation), because there may be significant *externalities* to widespread loan default. The failure of a company is likely to impact on other companies and could cast their solvency into doubt, for example if it defaults on loans due, or if it is costly for firms to switch suppliers or markets. Unemployed workers may default on their own debts.' (p. 47)

13. Keynes (1936), p. 156.
14. See Fama (1991), Shiller (1931); for a dissenting but compelling perspective see Miller (1990). Some economists (Hirshleifer, 1971; Fama and Laffer, 1971) have argued, in the same spirit as Keynes, that stock market research produces information with high private return but low social return, that stock price revaluations engendered by such research are primarily redistributive rather than productive.
15. Grossman (1991), pp. 1–2.
16. See Grossman (1991), Chapter 1.
17. Ibid.
18. See note 4 for a definition of systemic risk.
19. See Calvo and Mendoza (1996).
20. Modigliani and Miller (1958).
21. For a review of these tax issues see Aviazian and Turnbull (1987).
22. Tax policies in many developing countries have attempted to stimulate the development of security markets and to reduce corporate control. See World Bank (1990) and Glen and Pinto (1994).
23. This is sometimes termed financial fragility, see Davis (1992).
24. In this context, also see Helleiner (1996) for a discussion of tax policy and international financial flows.
25. For a discussion of the importance of the legal infrastructure, see Modigliani and Perotti (1991).
26. See Stiglitz and Weiss (1981) and Cho (1986).
27. See Jensen and Meckling (1976), Myers (1977), Aivazian and Callen (1980), Harris and Raviv (1991).
28. For a model analysing the costs and benefits of arm's-length financing versus bank financing see Rajan (1992). Allen (1993) has argued that the reliance placed on the stock market versus the banking system depends on the nature of the production technology that is being financed. When the technology is new and information about it widely dispersed, the stock

market aggregates investor assessments of the likelihood of success of the venture and thus enables more efficient production decisions by management based on better information. Financing through a bank, it is argued, is not efficient in such circumstances, because the information aggregation function is weak or missing. On the other hand, when the technology is a standard one, so that the information aggregation function is unimportant, bank financing becomes more efficient, because banks have a comparative advantage in overcoming moral hazard problems.

29. For a discussion of these issues see Davis (1992) and F. Mishkin (1996). Gerry Helleiner has pointed out (private communication) that governments in many developing countries have also frequently served as the ultimate source of bail-out for otherwise bankrupt institutions, which goes well beyond their lender-of-last resort function and seriously aggravates moral hazard problems.
30. See, for example, Caprio and Summers (1993).
31. See Mayer (1990), pp. 310–17.
32. See Singh and Hamid (1992), who also find that firms in the high-growth economies of East Asia use more debt than firms in other countries in the sample.
33. See Fanelli *et al.* (1998).
34. Both and Aivazian (1996) perform an econometric study of determinants of financial structures (proportions of debt financing) for firms in developing countries. The data baseused for the study is an expanded version of that underlying the Singh and Hamid (1995) study developed by the World Bank (International Finance Corporation). Booth and Aivazian find that while certain variables such as profitability and tangibility of assets are important, country factors (dummy variables) matter at least as much for developing economies. These results indicate the importance of country institutional factors.
35. See Ayogu *et al.* (1996), Balkan and Yeldan (1996), Fenelli *et al.* (1996), Noya *et al.* (1996) and Sen and Vaidya (1996).
36. This point is made by several authors, including Gibson and Tsakalotos (1994).
37. Stiglitz (1994) has argued that in environments with incomplete markets and significant asymmetric information, as in developing economies, higher interest rates can adversely affect the incentives and the quality mix of borrowers, and that government interest rate and direct-credit controls may enhance efficiency by improving this quality mix; also, that in such environments, firms may prefer to finance with equity because of lower moral hazard problems (avoidance of potential bankruptcy problems) as compared to debt. A similar point is made by Cho (1986), who relies on the Stiglitz and Weiss (1981) argument. On the other hand, Myers (1984) and Kumar (1994) recognize that there also may be significant moral hazard problems with equity.

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For the large number of developing countries undergoing significant structural transformations, one of the most important and controversial adjustment areas is that of the financial markets. The consequences of poorly functioning or troubled financial sectors – on financial institutions, depositors, resource allocation and, ultimately, growth and development – are significant and well known. It is also now understood that financial liberalization is not an 'event' but, rather, a process. However, there is little consensus as to when to liberalize financial markets or how it should be done.

This book contains the results of a research project initiated and supported by Canada's International Development Research Centre (IDRC) and managed by the Centro de Estudios de Estado y Sociedad (CEDES) in Buenos Aires, Argentina.

Focusing on the role of the institutional and enabling environment within which financial reform occurs, and the integration of principles of finance with more macro-economic approaches to the subject, this book contains case-studies of reform experiences in Argentina, India, Nigeria, Turkey and Uruguay. Thematic papers cover the following topics: the 'go-slow' versus 'big-bang' approach; the *tequila* effect and financial reform at the supranational level; implications of the Canadian experience for developing countries; links between banks and firms during reform in Eastern Europe; and a perspective from finance theory.

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