Financial Market Fragmentation and Reforms in Sub-Saharan Africa

Ernest Aryeeey
Hemanadha Hettige
Machiko Nissanka
William Steel
RECENT WORLD BANK TECHNICAL PAPERS

No. 272 Greaney and Kellaghan, *Equity Issues in Public Examinations in Developing Countries*

No. 273 Grimshaw and Helfer, editors, *Vetiver Grass for Soil and Water Conservation, Land Rehabilitation, and Embankment Stabilization. A Collection of Papers and Newsletters Compiled by the Vetiver Network*

No. 274 Govindaraj, Murray, and Chellara, *Health Expenditures in Latin America*

No. 275 Heggie, *Management and Financing of Roads: An Agenda for Reform*

No. 276 Johnson, *Quality Review Schemes for Auditors: Their Potential for Sub-Saharan Africa*

No. 277 Converry, *Applying Environmental Economics in Africa*

No. 278 Wijetilleke and Karunaratne, *Air Quality Management Considerations for Developing Countries*

No. 279 Anderson and Ahmed, *The Case for Solar Energy Investments*

No. 280 Rowat, Malik, and Dakolias, *Judicial Reform in Latin America and the Caribbean: Proceedings of a World Bank Conference*

No. 281 Shen and Contreras-Hermosilla, *Environmental and Economic Issues in Forestry. Selected Case Studies in Asia*

No. 282 Kim and Benton, *Cost-Benefit Analysis of the Onchocerciasis Control Program (OCP)*

No. 283 Jacobsen, Scobie and Duncan, *Statutory Intervention in Agricultural Marketing: A New Zealand Perspective*


No. 286 Tavoulareas and Charpentier, *Clean Coal Technologies for Developing Countries*

No. 287 Gillham, Bell, Arnn, Matthews, Rumeur, and Hear, *Cotton Production Prospects for the Next Decade*

No. 288 Biggs, Shaw, and Srivastava, *Technological Capabilities and Learning in African Enterprises*

No. 289 Dinar, Seidl, Olem, Jorden, Duda, and Johnson, *Restoring and Protecting the World's Lakes and Reservoirs*


No. 293 Preker and Feachem, *Market Mechanisms and the Health Sector in Central and Eastern Europe*


No. 295 Pohl, Jedrzejczak, and Anderson, *Creating Capital Markets in Central and Eastern Europe*


No. 297 Bulatao, *Key Indicators for Family Planning Projects*

No. 298 Odaga and Heneveld, *Girls and Schools in Sub-Saharan Africa: From Analysis to Action*

No. 299 Tamale, Jones, and Pswarayi-Riddihough, *Technologies Related to Participatory Forestry in Tropical and Subtropical Countries*

No. 300 Oram and de Haan, *Technologies for Rainfed Agriculture in Mediterranean Climates: A Review of World Bank Experiences*

No. 301 Mohan, editor, *Bibliography of Publications. Technical Department, Africa Region, July 1987 to April 1995*

No. 302 Baldry, Calamari, and Yaméogo, *Environmental Impact Assessment of Settlement and Development in the Upper Léraba Basin*

No. 303 Heneveld and Craig, *Schools Count: World Bank Project Designs and the Quality of Primary Education in Sub-Saharan Africa*

No. 304 Foley, *Photovoltaic Applications in Rural Areas of the Developing World*

No. 305 Johnson, *Education and Training of Accountants in Sub-Saharan Anglophone Africa*

No. 306 Muir and Saba, *Improving State Enterprise Performance: The Role of Internal and External Incentives*

(List continues on the inside back cover)
Financial Market Fragmentation and Reforms in Sub-Saharan Africa

Ernest Aryeetey
Hemamala Hettige
Machiko Nissanke
William Steel

The World Bank
Washington, D.C.
Technical Papers are published to communicate the results of the Bank's work to the development community with the least possible delay. The typescript of this paper therefore has not been prepared in accordance with the procedures appropriate to formal printed texts, and the World Bank accepts no responsibility for errors. Some sources cited in this paper may be informal documents that are not readily available.

The findings, interpretations, and conclusions expressed in this paper are entirely those of the author(s) and should not be attributed in any manner to the World Bank, to its affiliated organizations, or to members of its Board of Executive Directors or the countries they represent. The World Bank does not guarantee the accuracy of the data included in this publication and accepts no responsibility whatsoever for any consequence of their use. The boundaries, colors, denominations, and other information shown on any map in this volume do not imply on the part of the World Bank Group any judgment on the legal status of any territory or the endorsement or acceptance of such boundaries.

The material in this publication is copyrighted. Requests for permission to reproduce portions of it should be sent to the Office of the Publisher at the address shown in the copyright notice above. The World Bank encourages dissemination of its work and will normally give permission promptly and, when the reproduction is for noncommercial purposes, without asking a fee. Permission to copy portions for classroom use is granted through the Copyright Clearance Center, Inc., Suite 910, 222 Rosewood Drive, Danvers, Massachusetts 01923, U.S.A.

ISBN 0-8213-3861-7
ISSN: 0253-7494

Ernest Aryeetey is Senior Research Fellow at the University of Ghana. Hemamala Hettige is an economist in the World Bank's Policy Research Department. Machiko Nissanke is Senior Lecturer in Economics at the School of Oriental and Africa Studies, London. William Steel is Technical Specialist in the Africa Regional Office's Technical Families at the World Bank.

Library of Congress Cataloging-in-Publication Data
HG187.5.A357F56 1997 96-53413 332'.0987'28—dc21 CIP
Technical Paper Series

No. 161 Riverson and Carapetis, Intermediate Means of Transport in Sub-Saharan Africa: Its Potential for Improving Rural Travel and Transport
No. 165 Kellaghan and Greaney, Using Examinations to Improve Education: A Study in Fourteen African Countries
No. 179 Speirs and Olsen, Indigenous Integrated Farming Systems in the Sahel
No. 181 Mining Unit, Industry and Energy Division, Strategy for African Mining
No. 188 Silverman, Public Sector Decentralization: Economic Policy and Sector Investment Programs
No. 194 Saint, Universities in Africa: Stabilization and Revitalization
No. 196 Mabogunje, Perspective on Urban Land and Urban Management Policies in Sub-Saharan Africa
No. 197 Zymelman, editor, Assessing Engineering Education in Sub-Saharan Africa
No. 199 Hussi, Murphy, Lindberg, and Brenneman, The Development of Cooperatives and Other Rural Organizations: The Role of the World Bank
No. 203 Cleaver, A Strategy to Develop Agriculture in Sub-Saharan Africa and a Focus for the World Bank
No. 208 Bindlish and Evenson, Evaluation of the Performance of T&V Extension in Kenya
No. 209 Keith, Property Tax: A Practical Manual for Anglophone Africa
No. 214 Bonfiglioli, Agro-pastoralism in Chad as a Strategy for Survival: An Essay on the Relationship between Anthropology and Statistics
No. 218 Mohan, editor, Bibliography of Publications: Technical Department, Africa Region—July 1987 to December 1992
No. 225 Dia, A Governance Approach to Civil Service Reform in Sub-Saharan Africa
No. 226 Bindlish, Evenson, and Gbetibouo, Evaluation of T&V-Based Extension in Burkina Faso
No. 232 Creightney, Transport and Economic Performance: A Survey of Developing Countries
No. 238 Heath, Land Rights in Côte d'Ivoire: Survey and Prospects for Project Intervention
No. 250 Rangeley, Thiam, Andersen, and Lyle, International River Basin Organizations in Sub-Saharan Africa
No. 251 Sharma, Rietbergen, Claude R. Heimo, and Jyoti Patel, A Strategy for the Forest Sector in Sub-Saharan Africa
No. 255 Mohan, editor, Bibliography of Publications: Technical Department, Africa Region, July 1987 to April 1994
No. 276 Johnson, Quality Review Schemes for Auditors: Their Potential for Sub-Saharan Africa
No. 277 Convery, Applying Environmental Economics in Africa
No. 298 Odaga and Heneveld, Girls and Schools in Sub-Saharan Africa: From Analysis to Action
No. 301 Mohan, editor, Bibliography of Publications: Technical Department, Africa Region, July 1987 to April 1995
No. 303 Heneveld and Craig, Schools Count: World Bank Project Designs and the Quality of Primary Education in Sub-Saharan Africa
No. 305 Johnson, Educating and Training Accountants in Sub-Saharan Anglophone Africa
No. 318 Taylor, Boukambou, Dahniya, Ouayogode, Ayling, Noor and Toure, Strengthening National Agricultural Research Systems in the Humid and Sub-humid Zones of West and Central Africa: A Framework for Action
No. 326 Colletta, Balachander and Liang, The Condition of Young Children in Sub-Saharan Africa: The Convergence of Health, Nutrition, and Early Education
No. 329 Mohan, editor, Bibliography of Publications: Technical Department, Africa Region, July 1987 to April 1996
No. 331 Sharma, Damhaug, Gilgan-Hunt, Grey, Okaru and Rothberg, African Water Resources: Challenges and Opportunities for Sustainable Development
No. 336 Francis, with Akinwumi, Ngwu, Nkom, Odihi, Olomaje, Okunmade, and Shehu, State, Community and Local Development in Nigeria
No. 337 Kerf and Smith, Privatizing Africa's Infrastructure: Promise and Challenge
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>86</td>
<td>Implementing Educational Policies in Tanzania</td>
<td>Galabawa</td>
</tr>
<tr>
<td>87</td>
<td>Implementing Educational Policies in Lesotho</td>
<td>Thelejani</td>
</tr>
<tr>
<td>88</td>
<td>Implementing Educational Policies in Swaziland</td>
<td>Magalula</td>
</tr>
<tr>
<td>89</td>
<td>Implementing Educational Policies in Uganda</td>
<td>Odaet</td>
</tr>
<tr>
<td>90</td>
<td>Implementing Educational Policies in Zambia</td>
<td>Achola</td>
</tr>
<tr>
<td>91</td>
<td>Implementing Educational Policies in Zimbabwe</td>
<td>Maravanyika</td>
</tr>
<tr>
<td>101</td>
<td>International Migration and Development in Sub-Saharan Africa</td>
<td>Russell, Jacobsen, and Stanley</td>
</tr>
<tr>
<td>102</td>
<td>International Migration and Development in Sub-Saharan Africa</td>
<td>Russell, Jacobsen, and Stanley</td>
</tr>
<tr>
<td>132</td>
<td>Adjusting Educational Policies: Conserving Resources while Raising School Quality</td>
<td>Fuller and Habte, editors</td>
</tr>
<tr>
<td>147</td>
<td>The Effects of Economic Policies on African Agriculture: From Past Harm to Future Hope</td>
<td>Jaeger</td>
</tr>
<tr>
<td>175</td>
<td>Resource Management and Pastoral Institution Building in the West African Sahel</td>
<td>Shanmugaratnam, Vecdeld, Massige, and Bovin</td>
</tr>
<tr>
<td>181</td>
<td>Combatting AIDS and Other Sexually Transmitted Diseases in Africa: A Review of the World Bank's Agenda for Action</td>
<td>Lamboray and Elmendorf</td>
</tr>
<tr>
<td>184</td>
<td>Agricultural Research in Southern Africa: A Framework for Action</td>
<td>Spurling, Pee, M Kamanga, and Nkwanyana</td>
</tr>
<tr>
<td>211</td>
<td>Revitalizing Agricultural Research in the Sahel: A Proposed Framework for Action</td>
<td>Weijenberg, Dioné, Fuchs-Carsch, Kéré, and Lefort</td>
</tr>
<tr>
<td>219</td>
<td>Development of Rural Financial Markets in Sub-Saharan Africa</td>
<td>Thillairajah</td>
</tr>
<tr>
<td>230</td>
<td>Raising the Productivity of Women Farmers in Sub-Saharan Africa</td>
<td>Saito</td>
</tr>
<tr>
<td>231</td>
<td>Agricultural Extension in Africa</td>
<td>Bagchee</td>
</tr>
<tr>
<td>234</td>
<td>Population Growth, Shifting Cultivation, and Unsustainable Agricultural Development: A Case Study in Madagascar</td>
<td>Keck, Sharma, and Feder</td>
</tr>
<tr>
<td>242</td>
<td>Africa Can Compete! Export Opportunities and Challenges for Garments and Home Products in the U.S. Market</td>
<td>Biggs, Moody, van Leeuwen, and White</td>
</tr>
<tr>
<td>251</td>
<td>Supply and Demand for Finance of Small Enterprises in Ghana</td>
<td>Aryeeetey, Baah-Nuakoh, Duggleby, Hettige, and Steel</td>
</tr>
<tr>
<td>252</td>
<td>Projecting the Governance Approach to Civil Service Reform: An Environment Assessment for Preparing a Sectoral Adjustment Loan in the Gambia</td>
<td>Pinto and Mrope</td>
</tr>
<tr>
<td>258</td>
<td>The Rate of Fertility Decline in Botswana and Zimbabwe</td>
<td>Duncan and Muvandi</td>
</tr>
<tr>
<td>259</td>
<td>Policies Affecting Fertility and Contraceptive Use: An Assessment of Twelve Sub-Saharan Countries</td>
<td>Scribner</td>
</tr>
<tr>
<td>260</td>
<td>Financial Systems in Sub-Saharan Africa: A Comparative Study</td>
<td>Popiel</td>
</tr>
<tr>
<td>265</td>
<td>World Bank-Financed Projects with Community Participation: Procurement and Disbursement Issues</td>
<td>Gopal and Marc</td>
</tr>
<tr>
<td>266</td>
<td>Seed Systems in Sub-Saharan Africa: Issues and Options</td>
<td>Venkatesan</td>
</tr>
<tr>
<td>271</td>
<td>Small Enterprises Adjusting to Liberalization in Five African Countries</td>
<td>Parker, Riopelle, and Steel</td>
</tr>
<tr>
<td>274</td>
<td>Social Action Programs and Social Funds: A Review of Design and Implementation in Sub-Saharan Africa</td>
<td>Marc, Graham, Schaeter, and Schmidt</td>
</tr>
<tr>
<td>280</td>
<td>Agriculture, Poverty, and Policy Reform in Sub-Saharan Africa</td>
<td>Cleaver and Donovan</td>
</tr>
<tr>
<td>302</td>
<td>The Broad Sector Approach to Investment Lending: Sector Investment Programs</td>
<td>Harrold and Associates</td>
</tr>
<tr>
<td>311</td>
<td>The Impact of the Uruguay Round on Africa</td>
<td>Harrold</td>
</tr>
<tr>
<td>312</td>
<td>Procurement and Disbursement Manual for Projects with Community Participation</td>
<td>Gopal</td>
</tr>
<tr>
<td>331</td>
<td>Case Studies in War-to-Peace Transition: The Demobilization and Reintegration of Ex-Combatants in Ethiopia, Namibia, and Uganda</td>
<td>Colletta, Kostner, Wiederhofer with the assistance of Emilio Mondo, Taimi Sitari, and Tadesse A. Woldu</td>
</tr>
<tr>
<td>338</td>
<td>Cost Sharing in the Social Sectors of Sub-Saharan Africa: Impact on the Poor</td>
<td>Adams and Hartnett</td>
</tr>
<tr>
<td>344</td>
<td>Transport and the Village: Findings from African Village-Level Travel and Transport Surveys and Related Studies</td>
<td>Barwell</td>
</tr>
<tr>
<td>346</td>
<td>Structural Aspects of Manufacturing in Sub-Saharan Africa: Findings from a Seven Country Enterprise Survey</td>
<td>Biggs and Srivastava</td>
</tr>
</tbody>
</table>
# CONTENTS

FOREWORD ........................................................................................................... vii

ABSTRACT ........................................................................................................... ix

ACKNOWLEDGMENTS ......................................................................................... xi

ABBREVIATIONS .................................................................................................. xii

I. INTRODUCTION ............................................................................................ 1

II. BACKGROUND .............................................................................................. 3
   Initial Conditions and Reforms ........................................................................ 3

III. ANALYTICAL FRAMEWORK ........................................................................ 6
   Policy-based Explanation: Financial Repression ............................................. 6
   Structural and Institutional Explanations ....................................................... 6
   Synthesizing Alternative Explanations of Segmentation .................................. 8
   Hypotheses ....................................................................................................... 9
   Methodology ................................................................................................... 10

IV. INFORMAL FINANCIAL MARKETS ................................................................. 12
   Operating on One Side of the Market ............................................................. 12
   Relationship-based ......................................................................................... 13
   Intermediaries ................................................................................................. 14

V. FINANCIAL MARKET SEGMENTATION ......................................................... 16
   Managing Information and Risk ..................................................................... 16
   Evidence on Fragmentation ........................................................................... 18
   Total Cost of Lending .................................................................................... 24
   Efficiency of Informal Markets ..................................................................... 26

VI. FINANCIAL SECTOR RESPONSES FOLLOWING REFORMS ......................... 28
   Financial Deepening and Deposit Mobilization ............................................. 28
   Trends in Lending ........................................................................................... 32
   Interest Rates and Spreads ............................................................................ 35
   Portfolio Management .................................................................................... 36

VII. FINANCIAL GAPS AND NEW INSTITUTIONAL DEVELOPMENT.......................... 38

VIII. CONCLUSIONS AND POLICY IMPLICATIONS ........................................... 41

REFERENCES ...................................................................................................... 45
TABLES

1. Survey Sample of Informal Non-Bank Financial Institutions ................................................. 10
2. Survey Sample of Formal Banking Institutions ....................................................................... 10
3. Loan Administration Costs of Informal Institutions ................................................................ 22
4. Loan Administration Costs of Commercial and Development Banks ...................................... 22
5. Transaction Costs of Lending in Ghana as a Proportion of Total Loan Amount for Sector by Type of Bank ...................................................................................................................... 25
6. Changes in Composition of Bank Deposit Liabilities ................................................................ 31
7. Credit Allocation between the Private and Public Sectors ....................................................... 33
8. Number of Loans Approved Annually by Type of Informal Lender ........................................ 34
9. Interest Rates and Spreads in Sample Countries ..................................................................... 36

FIGURES

1a-d. Financial Deepening Indicators .......................................................................................... 29
FOREWORD

Well-functioning financial markets are essential to support the growth of investment and production in response to economic reform programs. The World Bank has been supporting financial sector reforms in African countries since the mid-1980s. These reforms have gone a long way toward removing repressive financial policies, improving the health of banks, and establishing a sound framework for regulation and supervision. But progress has often been frustratingly slow, and large segments of the population have little access to financial services.

This study investigates the experience of four African countries following financial liberalization, seeking explanations for the limited impact of financial policy reforms and for the fragmentation observed in African financial markets. The study is unusual in its comprehensive coverage of informal as well as formal market segments, including comparative survey data on transaction costs and risk management. It shows how informal financial agents use specialized techniques to solve the problems of information, risk and contract enforcement that inhibit banks from dealing with small clients.

Lessons from experiences of different countries across Africa, and from a range of actors within the financial sector, are important to design more effective strategies of financial development. African financial systems must be assisted to function more effectively to mobilize savings and service productive investments, not only in the formal sector but among underserved groups such as women and small-scale enterprises. This study suggests that indigenous informal financial activities and emerging semi-formal institutions have an important role to play.

Kevin M. Cleaver
Technical Director
Africa Region
ABSTRACT

What explains the existence of fragmentation in African financial markets and its persistence despite reforms to liberalize those markets? This paper reports findings from surveys of formal and informal institutions and their clients in Ghana, Malawi, Nigeria and Tanzania to test hypotheses explaining different aspects of fragmentation—which occurs when different market segments are poorly linked and interest rate differentials cannot be fully explained by differences in costs and risks. A central hypothesis was that reforming financially repressive policies would not be sufficient to overcome fragmentation of financial markets because of structural and institutional barriers to interactions across different market segments.

Substantial fragmentation of financial markets was observed. Informal and formal lenders largely pre-selected their client groups according to the availability of information and ability to manage risk using a specific methodology and product. The relatively low transaction costs and loan losses of informal institutions indicated that they provided a reasonably efficient solution to information, transaction cost and enforcement problems that exclude their clients from access to banking services. Nevertheless, the high rates of some moneylenders implied substantial monopoly power in underserved markets.

The findings showed little short-term impact of financial liberalization on financial deepening, liability structures, product innovation and outreach of formal banking systems, despite some strengthening of portfolios, competition and supervision. The continued lack of interest of banks in smaller clients can be explained by their collateral-based methodologies, perceptions of high risks, the costs of small transactions, and incentives for lending to the public sector. Increased competition in banking has generally not been sufficient to overcome these obstacles and stimulate banks to aggressively seek new, smaller clients. The findings imply that financial liberalization and bank restructuring in the African context should be accompanied by complementary measures to address institutional and structural problems such as contract enforcement and information availability.

Despite liberalization of financially repressive policies, the assets of informal lenders and savings collectors increased because of their linkages with expanding real sectors (for example, moneylenders are often traders with excess short-term liquidity), despite lack of access to formal finance. But the high localization of informal agents limits the extent of their financial intermediation.

The study identified financial gaps representing demand for credit by viable small enterprises that cannot satisfy the information and collateral requirements of banks but that demand larger or longer-term loans than informal lenders can provide. In some countries, innovative semi-formal institutions—non-banks registered as business enterprises—were emerging in response to such gaps. These range from questionable pyramid-type schemes to near-banks using modern banking methods to serve informal clients.
The study concludes that financial development strategies, and World Bank operations supporting them, should explicitly include informal and semi-formal financial institutions and attempt to reduce structural impediments to integration of different market segments in order to improve the extent and efficiency of financial intermediation in the medium term. ‘Integration’ means greater interaction between (and within) segments and access of clients to them, allowing different types of institutions to specialize efficiently for different segments. Banking laws and regulations in Africa need to be differentiated to take account of the different methodologies and susceptibility to regulation of different tiers of the financial system—formal, semi-formal, and informal.
ACKNOWLEDGMENTS

This study was supported by the World Bank Research Committee, the Swedish International Development Association, the Overseas Development Institute, the School of Oriental and African Studies (University of London), and the Leverhulme Trust. The field work was conducted by Ernest Aryeetey (Ghana), Mboya Bagachwa (Tanzania), C. Chipeta (Malawi), M.L.C. Mkandawire (Malawi), and Adedoyin Soyibo (Nigeria), with assistance from Martin Wall on the flow of funds, and Deborah Johnston on editing. The authors are grateful for comments from Gerald Caprio, Carlos Cuevas, Jean-Jacques Deschamps, Marcel Fafchamps, Sergio Pereira Leite, Kazi Matin, Richard Meyer, Ademola Oyejide, and Hennie van Greuning.
**ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>LSEs</td>
<td>Large-Scale Enterprises</td>
</tr>
<tr>
<td>M1</td>
<td>Money Supply: Demand Deposits Plus Currency in Circulation</td>
</tr>
<tr>
<td>M2</td>
<td>M1 Plus Time and Savings Deposits</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>ROSCAAs</td>
<td>Rotating Savings and Credit Associations</td>
</tr>
<tr>
<td>SCCs</td>
<td>Savings and Credit Cooperatives (or Societies)</td>
</tr>
<tr>
<td>SMEs</td>
<td>Small-and Medium-Scale Enterprises</td>
</tr>
<tr>
<td>SSA</td>
<td>Small-Scale Agriculture</td>
</tr>
<tr>
<td>SSEs</td>
<td>Small-Scale Enterprise</td>
</tr>
</tbody>
</table>
I. INTRODUCTION

In the 1980s, many countries in Sub-Saharan Africa (SSA) initiated financial policy reforms as part of structural adjustment programs. However, financial markets remain highly fragmented and inefficient, with little deepening (either in terms of monetization or wider clientele). Despite some improvements in economic growth and macroeconomic performance, investment remains dependent on external finance (foreign savings) and the savings-investment gap has widened in several African countries, including Ghana and Tanzania. The slow progress raises the issues of whether the design of reform programs adequately took into account the institutional and structural characteristics of financial systems in Africa and what role informal financial markets should play.

This paper examines market structure and responses under financial sector reforms in SSA to: (a) delineate the sources of fragmentation in financial systems, and note some recent positive developments; (b) analyze trends in savings mobilization and financial intermediation following reforms; and (c) suggest measures to improve financial intermediation and integration. Survey findings are used to evaluate the behavior of both informal and formal financial markets and their interrelationships, including the manner in which different financial agents handle risks and transaction costs. Indicators of financial deepening and lending to the private sector are evaluated. The countries studied—Ghana, Malawi, Nigeria and Tanzania—have similar types of financial systems but different degrees of financial development and liberalization, providing an opportunity for cross-country comparisons.

The analysis makes a conceptual distinction between efficient specialization for market niches by different segments of informal and formal finance and fragmentation with impediments to efficient intermediation. Efficient specialization for differentiated risk and cost characteristics occurs when each unit performs according to its comparative advantage and differences in interest rates reflect differences in cost of funds, transaction costs and risk.\(^1\) In fragmented markets, in contrast, wide differences in risk-adjusted returns are observed across segments. This is because funds and information do not flow between segments and clients have limited access to different financial instruments, resulting in low substitutability. Study results show that poor information and contract enforcement make it too costly for formal financial institutions to serve small businesses and households in many African countries. Until the underlying structural and institutional problems are solved, therefore, informal and semi-formal institutions have an important role to play in serving these financial markets.

\(^1\) This may closely approximate market conditions observable in some Asian countries, where a heterogeneous and dynamic informal financial sector continues to exist as a part of financial systems, reflecting specialization in financial services by each sector and increasing intermediation efficiency of the system as a whole (Biggs 1991, Ghate 1990).
Following some background on initial conditions and policy reforms (Chapter 2), the analytical framework used to examine market responses and performance is presented in Chapter III. Chapter IV describes the characteristics of informal financial markets in the sample countries, and Chapter V presents the evidence on segmentation. Chapter VI analyzes responses of different segments to policy reforms. Chapter VII focuses on new instruments and institutions emerging in response to policy shifts and the remaining financial gaps in markets. The paper concludes with policy implications (Chapter VIII).
II. BACKGROUND

The review of *Adjustment in Africa* by the World Bank (1994) acknowledges the limited progress in financial sector reform and calls for some rethinking of strategy. Financial liberalization alone has not proved sufficient to improve financial intermediation or increase savings and investment by the private sector. The lack of financial deepening is related to institutional weaknesses and structural obstacles, which may require complementary measures in order to raise mobilization of household savings by the formal financial sector and better integrate the informal financial sector.

In most African countries, the indigenous private sector consists largely of households and small-scale enterprises that operate outside the formal financial system. Informal savings activities are widespread but generally self-contained and isolated from formal institutions (Adams and Fitchett 1992; Bouman 1995). There is evidence of demand for external finance by enterprises that want to expand beyond the limits imposed by self-finance but that have historically lacked access to the banking system and whose needs exceed the capacity of informal lenders (Levy 1992, Liedholm 1991, Parker and others 1995, Steel and Webster 1992). Better integration among different segments of the financial system—formal, semi-formal and informal—could facilitate economic development through more effective resource mobilization from households and improved financial resource flows to enterprises with high potential (Seibel and Marx 1987).

Initial Conditions and Reforms

Ghana, Malawi, Nigeria and Tanzania were selected on the basis of having comparable financial systems, financially repressive policies prior to reform in the late 1980s, good documentation of their financial systems, and experienced local researchers. Financial policies pursued in the four sample countries in the pre-reform period shared certain financially ‘repressive’ characteristics, such as: restriction on market entry, often coupled with public ownership; high reserve requirements; interest rate ceilings; quantitative control on credit allocation; and restrictions on capital transactions with the rest of the world (Johnston and Brekk 1991; Montiel 1994). While the nature of particular measures varied by country, in general, the allocation of investible funds was shifted from the market to the government. The degree of government control over banking institutions reflected the overall economic development strategy, and so was markedly higher in Tanzania and Ghana, which pursued socialist strategies, compared to Malawi and Nigeria.

---

Informal activities have been referred to by many different terms, such as unorganized, non-institutional and curb markets. Conforming to recent trends in the literature, we use the term "informal finance" to refer to all transactions, loans and deposits occurring outside the regulation of a central monetary or financial market authority (Adams and Fitchett 1992, p. 2). The semi-formal sector has characteristics of both the formal and informal sectors — for example, legally registered institutions that are not directly regulated by the financial authorities.
which encouraged indigenous private agents following independence. Banking institutions were often treated as a source of government revenue and implicit taxation. Governments imposed high reserve requirements in the range of 20-25 percent of assets, sometimes exceeding 40 percent (over 80 percent in Ghana in the early 1980s). In the pre-adjustment period, the share of government and public enterprises in total domestic credit was 86 percent and 95 percent in Ghana and Tanzania, respectively, and well over 50 percent in Malawi and Nigeria. In Tanzania, banking institutions became merely a means of financing the budget deficit and operating losses incurred by parastatals (Collier and Gunning 1991).

Financial repression discouraged investment in information capital, and savings mobilization was not actively pursued. There was neither active liquidity and liability management nor any incentive to increase efficiency, resulting in high costs of financial intermediation. Many state-owned banks failed to take responsibility for the commercial viability of their operations or for risk assessment and monitoring of their loan portfolio.

Financial sector reforms were intended to address these conditions through liberalization and balance-sheet restructuring. Interest rates and credit allocation were decontrolled, and efforts were made to strengthen regulatory and supervisory frameworks. While the general thrust of these measures was similar for all four countries, the initial conditions differed, including banks' and borrowers' net worth and the scale of fiscal imbalances preceding financial sector reform, as did policy sequences and the pace of reforms. Ghana and Malawi managed to pursue reform measures in a more orderly manner than Nigeria or Tanzania. All of the countries initiated policy reforms during the period 1985-87 (although implementation in Tanzania was very slow before 1991).

The partial nature of reforms and inadequate institution-building are frequently mentioned as explanations for the disappointing outcomes of financial liberalization in Sub-Saharan Africa (World Bank 1994). The experience of the Southern Cone countries (Argentina, Chile and Venezuela) in South America shows that important conditions for successful liberalization include macroeconomic stability, prudential supervision and an adequate regulatory framework. These conditions were addressed to at least some extent in the financial reform programs introduced in Ghana and Malawi. In Ghana, macroeconomic stability and the reduction of fiscal imbalances were addressed before decontrol of the interest rate and credit allocation, which was phased-in over a two-year period. Simultaneously, extensive restructuring of bank balance sheets was undertaken with financial support from donors. Institution-building measures such as strengthening the regulatory and supervisory environment and development of money and capital markets received early attention. In Malawi, too, major fiscal and public enterprise reforms prior to financial liberalization reduced the cost of bank restructuring. Interest rates were decontrolled in a series of steps, along with institution-building measures. While the financial institutions of both countries could benefit from further strengthening, neither country experienced a major financial crisis.

In Tanzania, problems arose from delays in restructuring of parastatals, which were the banks' main borrowers. As the crisis of parastatals deepened in the adjustment period,
banks continued to extend credit to them while relying heavily on a line of credit from the Central Bank. Banks' net worth deteriorated significantly and non-performing loans accumulated. By the time financial sector reforms commenced in 1991, the need for balance-sheet restructuring had increased considerably. Thus weaknesses on the institutional side impeded progress in policy reforms.

In Nigeria, financial sector reforms were thrown into crisis due to the wrong sequencing of reform measures and the lack of the necessary prerequisites for liberalization. In particular, the wholesale deregulation of interest rates and market-entry requirements in the early years aggravated the instability of the financial system. A series of corrective measures had to be adopted to attend to problems as they arose, and this eventually raised the question of policy credibility.

Regardless of cross-country differences, reforms in all four countries have failed to increase financial depth or credit allocation to the private sector. All countries had some success in reducing the share of total credit to the public sector and raising the private sector share of commercial bank credit, but central government and public enterprises continued to dominate total credit, and the private sector share fell again in Malawi and Nigeria.

In comparison to the disappointing response of formal institutions to reform measures, our fieldwork shows that the informal financial sector has invariably responded dynamically to increasing demand for its services in the adjustment period in all four countries. In particular, signs of innovation were observed in the semi-formal financial sector. However, with weak linkages between segments, these new developments have as yet had little measurable impact on market fragmentation, resource mobilization and financial intermediation.
III. Analytical Framework

Two leading theoretical paradigms in contemporary financial economics provide analytical frameworks for examining the causes of financial market fragmentation and the impact of policy reforms. In addition, market conditions can be linked to the stage and nature of institutional development. These paradigms are presented as complementary to each other, but differentially focused on policy-based or structural/institutional explanations.

Policy-based Explanation: Financial Repression

The financial repression hypothesis (McKinnon 1973, Shaw 1973, and Fry 1982, 1988) attributes underdeveloped and inefficient financial systems to excessive government intervention, i.e., the result of government policy failure. Repressive policies are also seen as the prime cause of fragmentation (Roe 1991). Ceilings on deposit and loan rates tend to raise the demand for funds and depress the supply. Unsatisfied demand for investible funds then forces financial intermediaries to ration credit by means other than the interest rate, while an informal market develops at uncontrolled rates. A fragmented credit market emerges in which favored borrowers obtain funds at subsidized, often highly negative real interest rates, while others must seek credit in inefficient, expensive informal markets.

In this view, removing restrictive policies should enable the formal sector to expand its frontier and thereby eliminate the need for informal finance. It is argued that financial liberalization would lead to financial deepening; improved efficiency, resulting in lower spreads between borrowing and lending rates; and increased flow of funds between segments, including better access to formal finance of previously marginalized savers and borrowers.

Structural and Institutional Explanations

Other authors have concentrated on a range of structural and institutional features of the financial markets of developing countries to explain fragmentation. Hoff and Stiglitz (1990) advance an explanation for persistent fragmentation based on imperfect information on creditworthiness and differences in the costs of screening, monitoring and contract enforcement across lenders. In the presence of imperfect information and costly contract enforcement, market failures are thought to result from adverse selection and moral hazard, which undermine the operation of financial markets. Thus, the level of

---

3 Adverse selection occurs as interest rates increase and borrowers with worthwhile investments become discouraged from seeking loans. The quality of the mix of loan applications changes adversely as interest rates increase. Further, borrowers have an incentive to adopt projects that promise higher returns but have greater risks attached. This increases the risk of default. Moral hazard occurs when some applicants
interest rates affects the risk composition of financial portfolios (Stiglitz and Weiss 1981; Stiglitz 1989). Lenders may resort to non-price rationing rather than raise interest rates when faced with excess demand for credit, due to concern about greater risk. As a result, market equilibrium may be characterized by credit rationing even in the absence of interest rate ceilings and direct allocation. Thus, it is argued that liberalized markets do not necessarily ensure Pareto efficient allocation and state intervention may be justified to increase access by undeserved market segments (Stiglitz 1994).

Problems arising from imperfect information are likely to be most pronounced in low-income countries. Economy-wide information flows may be extremely limited, and gathering information is often costly.

Information asymmetries are likely, as would-be borrowers may have more information about their ability to repay than potential lenders. Poor information systems encourage segmentation by raising the cost to formal institutions of acquiring reliable information on both systemic and idiosyncratic risks for all but the largest clients. In contrast, informal agents rely exclusively on localized, personal information, which gives them local monopoly power but constrains their ability to scale up.

Other structural views emphasize the close interrelationship between the structure of financial markets and the development of the real sector. Gertler and Rose (1994) analyze the symbiotic relation between finance and growth based on two key concepts: a premium for external finance and a borrower’s net worth. These determine the relative efficiency of a financial system and its dynamic evolution. Development of the real sector raises borrowers’ net worth and "tends to reduce the premium attached to external finance, which in turn serves to stimulate further development" (Gertler and Rose 1994, p. 32). The premium for external finance then is inversely related to borrowers' net worth, and they jointly determine the level of investment.

This two-way interactive relationship links the evolution of an economy's financial structure to a firm's changing financial needs over its lifecycle. In this evolutionary process, the development of financial intermediation is critically dependent on improvements in monitoring and enforcement technologies. This reduces the premium on external finance and also the spread between the lending and deposit rates.

borrow to pay high interest on existing loans to avoid bankruptcy or borrow without the intention or the capacity to pay back loans.

The former concept refers to an additional premium borrowers pay for uncollaterized loans and insurance, due to frictions introduced by informational and enforcement problems. The latter is defined as the sum of a borrower's net liquid assets and the collateral value of his illiquid assets. This consists not only of tangible physical assets but also any prospective future earnings that the borrower can credibly offer as collateral. Thus, the borrower's accumulated net worth depends both on past earnings and anticipated future prospects.
Segmentation may also result from weaknesses inherent in the infrastructure that supports the financial system. For example, the adequacy of the legal infrastructure affects the costs and risks of contract enforcement, which in turn influence both the willingness of lenders to enter into financial agreements and the type of security they are willing to accept. In addition, the formal financial sector's ability to offset the risk of default may be limited by the absence of a well-functioning insurance market and of markets for the sale of confiscated collateral (Binswanger and Rosenzweig 1986).

In low-income countries, reliance on collateral excludes many otherwise creditworthy small-scale borrowers, especially where land tenure is not legally explicit. Market segments that formal banks avoid for these institutional reasons may nevertheless be served by informal agents who use personal relationships, social sanctions, and various collateral substitutes such as reputation and group responsibility.

The historical weaknesses of banking systems established primarily to serve import-export trade between Africa and the colonial center may have also exacerbated structural tendencies for fragmentation. Their lack of interest and expertise in lending to indigenous, locally-oriented firms may not be easily overcome. Furthermore, inadequate bank regulation and supervision over the years has propagated financial mismanagement and poor portfolio performance, which in turn may raise the perceived risk for term lending to small enterprises. In this situation, financial sector reforms may prompt banks to address management weakness by focusing on known profitable segments, rather than by diversifying portfolios.

Synthesizing Alternative Explanations of Segmentation

The explanations for segmentation discussed above are not necessarily mutually exclusive. Ghate (1988) suggests that the informal sector consists of two parts. One part, represented by indigenous bankers, rotating savings and credit associations (ROSCAs; see Bouman 1995) and pawnbrokers, is autonomous and historically antedates the formal sector. The other part is reactive, developing in response to controls over the formal sector. In this latter aspect, informal sector credit can be viewed as "residual" finance, satisfying spillover demand by those rationed out from the formal market (Bell 1990).

A useful distinction is also made by Roemer and Jones (1991) between a "parallel market" and a "fragmented market." Parallel markets arise principally to evade government controls and regulations, but markets can become fragmented in the absence of government controls due to inherent operational characteristics. They suggest that "credit markets in developing countries display characteristics of both parallelism and fragmentation" (p. 8). Evaluated in this light, the financial repression hypothesis is concerned with parallelism, while the imperfect information paradigm more effectively explains persistent fragmentation despite liberalization – as discussed in the findings presented subsequently. Informal segments thrive even with considerably reduced government controls, and are not merely institutional expressions of the distortions caused
by financial repression. Indeed, our evidence suggests that each segment has some comparative advantages in serving a specific market niche.

Structural and institutional barriers across segments provide the opportunity to exploit monopoly power, thus perpetuating fragmentation. A pronounced feature of financial markets in SSA is the separation of formal and informal sectors into almost discrete enclaves (Seibel and Marx 1987). A critical policy-related question is whether segment-specific advantages can be translated into market efficiency. Measures to promote better integration of segments may be necessary (Seibel 1989). As policy-induced bottlenecks are addressed by financial sector reforms, the extent to which structural and institutional deficiencies constrain efficient specialization becomes more observable. To examine this question empirically, we turn to the operational characteristics of different segments and their responses to policy reforms.

Hypotheses

A principal objective of the research was to investigate the extent to which informal segments represent institutional expressions of the distortions caused by financial repression and the extent to which they may thrive even with considerably reduced controls. If informal finance represents an efficiency-improving solution to structural problems of imperfect information and contract enforcement, one would expect to observe specialized techniques designed to minimize transaction costs and risks in dealing with narrow market segments. A high degree of specialization could be observed in the form of agents operating on only one side of the market, in a limited range of financial instruments, and in monopoly power (resulting from the inability of clients to arbitrage between different sources and the inability of other agents to penetrate localized segments (Aleem 1990).

Under the financial repression hypothesis, liberalization of restrictive policies on interest rates and entry would be expected to lead to greater access to formal finance of previously marginalized borrowers, lower spreads between borrowing and lending rates, increased financial flows between segments, and a diminished role for informal finance. One limitation in testing for these results, however, is that the time period in which they should be observed is not well-defined. Initially, some perverse effects may be anticipated when interest rate ceilings are removed and banks are restructuring their portfolios. The study was conducted more than three years after reforms were initiated in each of the countries, considered sufficient to observe initial effects on informal finance, although reform of the formal financial sector was not necessarily complete, as noted below. If financial markets are fragmented, reforms in the formal financial sector would have little impact (through financial flows or client arbitrage) on informal activities, which would respond more to changes in financial demand and supply in the real economy than to changes in financial policies.
Methodology

Data were collected on 283 informal financial institutions and 174 bank branches in Ghana (160 observations), Malawi (104), Nigeria (104) and Tanzania (89) during 1992 and 1993 (Tables 1 and 2). Efforts were made to survey branches representing all the major commercial and development banks in each country and a representative sample of specialized banking institutions (such as rural banks, community banks, building societies, and postal bank). For informal respondents, no systematic enumeration was available that could serve as a sampling frame. Furthermore, differences in the nature of informal institutions were found across countries. Hence the approach was to select

Table 1: Survey Sample of Informal Non-Bank Financial Institutions
(number of observations)

<table>
<thead>
<tr>
<th>Country</th>
<th>Savings Collectors</th>
<th>Money Collectors</th>
<th>Traders, lenders</th>
<th>Landlords</th>
<th>ROSCAs</th>
<th>SCCs</th>
<th>Unions</th>
<th>Other a</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>28</td>
<td>12</td>
<td>--</td>
<td>18</td>
<td>12</td>
<td>18</td>
<td>2</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>15</td>
<td>20</td>
<td>--</td>
<td>12</td>
<td>10</td>
<td>4</td>
<td>3</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Malawi</td>
<td>--</td>
<td>23</td>
<td>29</td>
<td>9</td>
<td>9</td>
<td>--</td>
<td>--</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Tanzania</td>
<td>--</td>
<td>--</td>
<td>30</td>
<td>10</td>
<td>19</td>
<td>--</td>
<td>--</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>55</td>
<td>59</td>
<td>49</td>
<td>50</td>
<td>22</td>
<td>5</td>
<td>283</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>15.2</td>
<td>20.8</td>
<td>20.8</td>
<td>17.3</td>
<td>17.7</td>
<td>7.8</td>
<td>1.8</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

a/ Savings and loan companies, finance houses.

Source: Survey data.

Table 2: Survey Sample of Formal Banking Institutions
(number of observations, including branches)

<table>
<thead>
<tr>
<th>Country</th>
<th>Commercial and merchant banks</th>
<th>Development banks</th>
<th>Other a</th>
<th>Total</th>
<th>of which, rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>38</td>
<td>14</td>
<td>18</td>
<td>70</td>
<td>35</td>
</tr>
<tr>
<td>Malawi</td>
<td>14</td>
<td>3</td>
<td>17</td>
<td>34</td>
<td>15</td>
</tr>
<tr>
<td>Nigeria</td>
<td>34</td>
<td>0</td>
<td>6</td>
<td>40</td>
<td>8</td>
</tr>
<tr>
<td>Tanzania</td>
<td>6</td>
<td>15</td>
<td>9</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>32</td>
<td>50</td>
<td>174</td>
<td>63</td>
</tr>
<tr>
<td>Percent</td>
<td>52.9</td>
<td>18.4</td>
<td>28.7</td>
<td>100.0</td>
<td>36.2</td>
</tr>
</tbody>
</table>

a/ Rural banks (Ghana); community and people’s banks (Nigeria); building society and union of savings and credit cooperatives (Malawi); postal bank (Tanzania).

Source: Survey data.
representative respondents from three broad categories of informal institutions (see Chapter IV), based on the knowledge of the local research teams obtained through prior research on each country's financial system and on interviews with borrowers (which also provided a cross-check on the data). Absent a basis for determining the sample's representativeness in terms of the numbers and assets of different types of institutions, the analysis focuses on differences in institutional characteristics, behavior and performance between categories and between informal and formal financial institutions.

The questionnaires sought data on the agents themselves, portfolio characteristics, interest rates, risk management, transaction costs, delinquency rates, and linkages to other institutions. Retrospective information was obtained on changes over the preceding two years.\(^5\) Data on formal financial flows and indicators were gathered from published sources and central bank authorities. Data for 1987-92 are compared to 1981-86 to analyze changes occurring after reforms were under way.

\(^5\) Retrospective data are subject to bias because less successful institutions that failed are excluded from the sample. However, the observation of the researchers based on previous research in the sector was that dropout rates were relatively low for most informal financial agents, with some notable exceptions that are described in the text. The data can be considered representative of agents who stayed in business during the period under review, although they cannot be generalized to estimate changes at the national level, given the absence of census and panel data.
IV. **Informal Financial Markets**

Informal financial institutions can be defined as financial activities that are not regulated by central bank supervisory authorities. Financial transactions involve the exchange of money in the present for a promise to pay in the future. The ability to enforce these contracts is critical for the survival of a financial intermediary. Unlike the formal sector, informal financial transactions rarely involve legal documentation. Three basic types of informal agents use different approaches to risk and contract enforcement problems. One category specializes for either the credit or the savings side of the market. Another bases the financial transaction on a personal or business relationship. A third category provides full financial intermediation between savers and borrowers. This category includes organizations that are registered under non-financial legislation, for example as cooperatives, businesses, or non-governmental organizations (NGOs), sometimes referred to as ‘semi-formal.’ Roughly a third of the sample was drawn from each of these three categories, whose techniques are described below.

In general, informal financial agents (individuals and managers of organizations) in the sample tended to be well-educated relative to real informal sector workers and were generally in their mid-40s. Overall, about 60 percent of those sampled had attended secondary or other post-primary school (compared with 10 percent of informal sector workers in Tanzania). Savings collectors tended to be younger and less educated. In urban Nigeria, for example, savings collectors averaged 7.2 years of school, moneylenders 10.5, leaders of SCCs 14.0, and ROSCA organizers 16.8. Men dominated the samples of individual lenders and savings collectors; women were most likely to be found leading ROSCAs (46 percent in Ghana, 57 percent in Tanzania, 80 percent in Nigeria) and SCCs (26 percent in Tanzania).

**Operating on One Side of the Market**

The literature is replete with references to moneylenders, usually individuals who provide credit. In practice, ‘moneylending’ covers a wide range of arrangements that differ across countries, with interest rates ranging from zero to as much as 100 percent a month. All are based on first-hand knowledge of the borrower. Professional moneylenders are few: they are most common in Malawi (*katapila* or *chimbazo*). In Ghana, only a few remain who are registered under the Moneylenders Ordinances of 1940 and 1957. More commonly, moneylenders provide loans as a part-time activity.

---

6 Information in this section is based on the following reports of field work for this study: Aryeetey 1994; Bagachwa 1995; Chipeta and Mkandawire 1991 and 1996b; Soyibo 1996a.

7 The savings and credit societies and ROSCAs in our sample did not report making loans to non-members, although *stokvels* in South Africa and Lesotho and *iqqubs* in Ethiopia sometimes lend to non-members who are guaranteed by a member.

8 In general, the most common source of informal finance is from relatives and friends. This type was not covered in the survey because of its non-commercial character.
often using surplus funds from other sources such as their own commercial business. Professional and part-time moneylenders accounted for 55 observations in the combined survey sample. In Tanzania, very few respondents would admit to lending money for profit. In Malawi and Tanzania, informal credit (cash or in kind) was most often relationship-based (see below).

Individuals who operate primarily on the savings side were found only in West Africa (43 observations). These savings collectors take regular deposits (usually on a daily basis) of an amount determined by each client and return the accumulated sum (typically at the end of each month) minus one day's deposit as commission. Called 'mobile bankers' in the literature (Miracle, Miracle and Cohen 1980, Gentil 1992), they are known as susu collectors or olu in Ghana and esusu or ajo in Nigeria (tontiniers in francophone countries). They form a symbiotic relationship with market traders, protecting daily earnings from competing claims and ensuring working capital to restock supplies at the end of the month (Aryeetey and Steel 1995). Savings collectors sometimes extend 'advances' to their best clients before the end of the month and occasionally lend to non-clients. Savings collectors screen and monitor borrowers through daily observations while collecting deposits. But their ability to lend is constrained by their lack of a capital base other than their monthly collections.

Some NGOs operate credit schemes (Reed and Reiling 1994). Although they are increasingly attempting to operate on a commercial and financially sustainable basis, in the past they have tended to have a welfare orientation and to be heavily subsidized, and hence were not included in the survey sample.9

Relationship-based

Rotating savings and credit associations (ROSCAs) were pervasive in all the countries studied, known as susu in Ghana, esusu in Nigeria, upatu or mchezo in Tanzania, and chilemba or chiperegani in Malawi.10 ROSCAs are membership groups in which all members pay in set amounts at regular intervals (monthly, weekly or daily) to a common pool, which is handed over to each member in turn (usually randomly, but some variations allow bidding). All recipients but the last receive the pooled sum sooner than

9 The emergence of a growing number of NGOs and village banks as sustainable financial intermediaries serving the poor in a number of countries offers the hope that such institutions can play a more important future role in filling financial gaps.

10 Other names in Nigeria include ajo (Yoruba), isusu and otutu (Igbo), osusu (Edo), adashi Hausa), dashi (Nupe), efe (Ibibio), and oku (Kalabari Ijaw). Known as tontines in francophone countries, they are common throughout the world (Aryeetey and Steel 1995, Bouman 1995, Lelart and Gnansounou 1989, Von Pischke 1991). ROSCAs represent a financial form of traditional mutual labor-exchange groups (mbooba in Ghana, aaro in Nigeria), which provide credit in kind by doing certain types of labor on members' farms in rotation. In Nigeria, animal power may be obtained on credit for a pledge of future labor or farm produce. These non-financial forms were not sampled.
if they had saved the same amounts alone. Intermediation occurs between those whose turns come earlier and later within a small, closed group over a fixed period of time, with no compensation to late recipients for providing their savings or for the risk that early recipients will drop out. The system is based on mutual trust among members known to each other. ROSCA proceeds are most commonly spent on consumption goods (especially among civil servants) or used as working capital (especially among traders). In Malawi, purchase of fertilizer for farm use was a principal use.

While ROSCA groups, in principle, terminate after a full rotation, some continue over long periods and develop supplementary insurance, loan and welfare funds. Another variation is accumulating savings and credit associations which save jointly toward common objectives such as school fees, annual festivals, or community development, sometimes making loans at high rates to increase the accumulated amount. They tend to be somewhat larger, averaging 37 members in Ghana as against 12 for ROSCAs. Savings and credit associations represented 49 observations across all four countries.

Traders are an important source of informal credit in all the countries studied. They supply either inputs or cash advances to farmers, linked to purchase of produce at a highly discounted price. In Malawi and Tanzania, landlords and estate owners often lend to their tenants. Individual lenders who had long-term business relationships with their clients accounted for 59 observations.

Intermediaries

Savings and credit cooperatives (SCCs), or societies, raise savings from and make loans to members. While they are membership organizations, sometimes raising money from shares as well as voluntary deposits, they are, unlike ROSCAs, relatively large and open to new members. In some countries, they may be legally registered as cooperatives (or they may be the savings and credit arm of a cooperative formed for other purposes).

Credit unions are registered as such and represent a more formal form of SCCs based on share capital. Members are often civil servants saving for difficult times and borrowing for consumer durables. In Ghana, credit unions are now regulated as financial intermediaries under the Non-Bank Financial Institutions (NBFI) Law (1993). SCCs and credit unions (with 50 and 22 observations, respectively in the combined sample) use repeat transactions to screen borrowers. They were estimated to have deposits equivalent to about 4 percent of commercial bank deposits in Tanzania in 1990.

Other semi-formal institutions (5 observations) have emerged that both mobilize and lend funds to the general public. In Ghana, susu companies were registered businesses that utilized susu collector techniques to mobilize savings by promising credit to those who accumulated over six months or more. Nigeria's finance houses--private investment companies registered under the companies act--have offered high dividends on investors' funds, which were in principle intended for high-return loans and investments but in practice were often used for foreign exchange deals to take advantage
of exchange rate controls. These finance houses were somewhat belatedly (and ineffectively) brought under regulation in 1991 by the Bank and Other Financial Institutions decree. In both cases, questionable management practices and the need to mobilize ever more funds to meet obligations turned some of the operations into pyramid-type schemes and led to their collapse. A more stable form is the savings and loan association, now recognized and regulated under Ghana's NBFI law.

Except for savings collectors, informal finance was predominantly a part-time activity. Among those who responded, lending activities took about 30 to 40 percent of the work time of moneylenders and leaders of ROSCAs and SCCs.
V. FINANCIAL MARKET SEGMENTATION

This Chapter compares the techniques of banks and informal financial institutions showing how the latter use specialized techniques to reach market segments that would otherwise lack access to financial services. It then discusses evidence on market fragmentation and draws conclusions on the extent to which informal markets represent an improvement in efficiency.

Managing Information and Risk

The banks surveyed in the sample countries viewed small borrowers as riskier than large ones for reasons often related to the difficulty of obtaining accurate information about them: geographical remoteness, illiteracy, and unreliable incomes. The collateral requirements they imposed on borrowers and high minimum deposit requirements effectively screened out the vast majority of small clients.\(^\text{11}\)

Informal lenders drew heavily on information obtained through personal, social and business relationships in order to pre-select clients. ROSCAs, SCCs and credit unions operated with group membership selection criteria. Traders and landlords lent only to their customers and tenants. Savings collectors normally lent only to their most regular depositors. While other moneylenders did not necessarily pre-select their clients, they relied heavily on recommendations of previous clients (60 percent of moneylenders in Ghana) and personal knowledge of applicants.

Whereas banks depended heavily on a client's track record and continuing relationship, consistent with game theory concerning repetitive interactions, the informal lenders surveyed appeared largely indifferent between new and repeat borrowers, provided they met the lender's selection criteria.\(^\text{12}\) Among Ghana's moneylenders, the proportion of successful first-time applicants (68 percent) was not significantly different from that of repeat applicants (74 percent).

Most informal lenders did not use interest rates to discriminate among clients. Through pre-screening, all of the borrowers of each lender fell into a similar risk category. The most common exception was that savings collectors who lent to non-clients charged them much higher rates than their regular depositors. Another exception was for new clients of moneylenders in Nigeria, who paid as much as 8 percent more than existing customers.

\(^{11}\) Although fixed property collateral requirements were ostensibly intended to compensate in case of default, in practice efforts to actually enforce such collateral were rare among the banks surveyed, because of the uncertain and costly legal processes involved. Collateral was, however, important to satisfy banking regulations concerning portfolio risk profile.

\(^{12}\) NGOs engaged in micro-finance, however, often use repetitive interaction as a means of gaining information on the client's reliability, for example, through required savings over a period of time or through small initial loans leading to larger loans if repayments are made on time.
Contract Enforcement

Banks attached considerable importance to screening loans through stringent collateral requirements. Collateral pledged in exchange from loans serves three important functions; first, mitigating the problem of adverse selection by enabling the lender to screen out borrowers most likely to default; second, adding an incentive for the borrower to repay, thereby reducing the moral hazard; and third, offsetting the cost to the lender of a loan default (Udry 1990). Many small borrowers believed that their loan applications were rejected due to lack of collateral. Many banks, especially those undergoing reform, recognized the problems caused by the absence of credit reference bureaus and poor inter-bank cooperation.

The ability of banks to assess projects was hampered by the lack of good market information on supply, demand, costs and risks. While banks often acknowledged the value of character-based assessments for small borrowers who cannot provide the required documentation and assets demanded, they have yet to introduce any major changes in assessing credit-worthiness. Banks have begun to look for alternative securities, such as blocked accounts and letters of undertaking, but landed property remains the dominant form of collateral, even though foreclosure of such property is problematic because of ambiguities surrounding property rights and the slow, non-transparent judicial process.

Informal lenders generally required security, but were much more flexible than banks. Informal lenders accepted personal guarantees and arrangements with the applicant's employer, as well as property (fixed or movable). Lenders were more likely to distinguish between borrowers in terms of security requirements than interest rates. About 60 percent of moneylenders in Nigeria, 63 percent in Tanzania and 83 percent in Ghana required such security, as did 76 percent of credit unions in Ghana (but smaller SCCs and ROSCAs generally did not). The threat of collection was regarded more seriously by clients than for formal sector loans because informal enforcement is easier than going through the legal system. It is much easier for a landlord-lender to make productive use of pledged farmland indefinitely than for a bank to seize it. Informal lenders were more likely to use threats of harm to property or person than to turn to the legal system.

Nevertheless, there was no evidence of especially aggressive contract enforcement measures by informal lenders, as suggested in some of the literature (Shipton 1991, Yotopoulos and Floro 1991). Personal relationships, either within membership groups or through family members, were often instrumental in ensuring repayment. Among group-based organizations, and especially in rural areas, peer pressure, social stigmatization and exclusion from other financial transactions such as informal insurance were considered effective (except when large numbers are unable to repay, e.g., because of drought). The inability of formal institutions to trigger similar social sanctions limits their ability to reach large proportions of the population.
Given low repayments, banks would be expected to devote considerable attention to contract enforcement. Yet, foreclosure of collateral or legal action was rarely observed in the case study countries. The attitude of banks toward contract enforcement was more subtle. The first line of action was often to persuade delinquent borrowers to resume their payments. Most Ghanaian bankers indicated that delinquency was generally not willful, but due to poor returns on investments and bad management of small enterprise projects. As many as 85 percent of Ghanaian bank managers indicated that they sometimes refinanced projects in the hope that distressed borrowers would revive.

**Interlinked Loans**

The survey found the interlinkage of loans with real sector transactions was a common informal technique to ensure contract enforcement in all countries, especially in Tanzania (86 percent of rural moneylenders' loan volume in 1992). Interlinked transactions represent a form of collateral that helps reduce uncertainty, moral hazard and adverse selection (Udry 1990). Traders may provide materials and equipment on credit or make a cash loan contingent on purchasing such inputs or selling the crop to the trader. In Malawi, all estate owners making loans linked them in this way. The effectiveness of interlinked transactions in reducing uncertainty may be seen in the lower implicit rate (6 percent a month) for linked loans than for unlinked cash loans (9 percent) from trader-lenders in Tanzania. The implicit interest rate for trader loans in Ghana was about 50 percent of the loan amount over the farming season. However, most moneylenders in Ghana and Nigeria did not require a business relationship with clients.

Landlords sometimes linked loans to the transfer of land rights or to the provision of labor services. Richer farmers could pay for a loan by transferring the use of mortgaged land to the lender for a fixed period (usually one to two years in Tanzania) or providing a portion of the harvest. For smaller loans, the lender obtained use of the land until the loan principal was repaid. The greater security of linked transactions resulted in loan sizes that were five times the size of unlinked loans for traders and double for landlords in Tanzania. In Nigeria, moneylenders sometimes accepted contractual repayment in the form of labor or sale of produce at a discount.

**Evidence on Fragmentation**

Fragmentation is indicated by weak linkages between segments and by differences in returns that cannot be explained by costs and risks. To get at the latter, the study team gathered data on interest rates, default risk and transaction costs. Precise comparison was difficult, however, because of the hazards of comparing loan instruments of widely different terms and conditions.
**Linkages between Segments**

Financial flows from formal to informal markets were negligible. Informal financial agents generally had a limited capital base and little access to borrowed funds. Even those moneylenders who could access bank credit through their other business activities rarely did so for the purpose of on-lending. The main sources of the expanding supply of loanable funds by informal agents were savings mobilization and reinvested profits (including from other activities). Only two instances of mobilizing external funds other than deposits were reported. One informal lender in Malawi used a bank loan; and credit unions in Ghana sought funds from international donors to supplement their deposit base and accommodate growing demand for credit.

On the other hand, informal deposit mobilizers (except for ROSCAs) frequently maintained bank accounts, especially those in urban areas. In Ghana, 89 percent of informal operators reported having a bank account, in Nigeria 82 percent, and in Tanzania 97 percent in urban areas and 67 percent in rural areas. Although some credit unions maintained bank deposits to earn interest, most informal operators used bank accounts mainly to ensure the safety of mobilized deposits. *Susu* collectors in Ghana deposited an average of 45 percent of their mobilized savings, accounting for as much as 40 percent of average deposits in one branch bank, though commercial banks neither paid interest on these short-term accounts nor recognized that some of their clients were mobilizing substantial informal savings (Aryeetey and Steel 1995).

No direct linkages were found between informal agents. However, some clients used savings collectors to accumulate funds for contributions to their ROSCA or credit union. While it was not uncommon for clients to use more than one informal institution for saving, few were able to obtain credit from more than one source. Informal clients generally had neither a savings nor a credit relationship with formal banks.

**Lending Gap**

Small enterprises rarely drew on informal finance, which tended to be either too expensive (from moneylenders) or too small and unreliable (SCCs, savings collectors). Nevertheless, surveys of small and micro enterprises indicate substantial unsatisfied demand for finance (Levy 1992, Parker and others 1995, Steel and Webster 1992) that could be more fully met by the types of micro-finance institutions that have succeeded in some countries, especially South Asia and Latin America (Christen, Rhyne and Vogel 1994, Otero and Rhyne 1994, Reed and Reiling 1994).

While credit unions had the capacity to provide larger loans than many informal lenders, in practice their average loan size was relatively small. Their preference was to provide members with low-cost consumer loans. Their low rates on savings tended to limit their capital base, forcing them to ration loans. Their mobility to quickly provide the full amount requested make them unsuitable for small business clients without a change in orientation.
**Interest Rates**

Interest rates varied widely across informal institutions, as well as between formal and informal markets. Moneylenders' rates were generally at least 50 percent above formal rates, with substantial variations both across and within countries. They were highest in Malawi at an average monthly interest of 48 percent, ranging as high as 100 percent a month, and considerably lower in Nigeria (19 percent) and Ghana (10 percent). In Tanzania, unlinked loans from landlords and traders averaged 8 to 9 percent a month for three-month loans and 6 percent for longer-term loans (six months or a year). The average monthly interest rate of SCCs in Malawi was also relatively high at 13 percent, well above formal sector rates; in Ghana it was about 5 percent a month for six-month loans; while the average of 2.6 percent a month in Tanzania was comparable to the 31 percent per annum charged by the state-owned commercial bank.

When savings collectors provided advances to clients, they generally maintained the same monthly charge of approximately 3.3 percent (one day's deposit) as for savings. When they lent to non-clients, however, their rates were often comparable to those of moneylenders. In ROSCAs, no explicit interest was paid, and repeat cycles of saving and lending were usually arranged so that all members eventually received interest-free loans.

**Default Risk**

The cost of the risk of default is defined as “those expenses for the risk of loan default incurred by the lending institutions, for example, provision for loan losses, the loan guarantee fees paid, and the actual bad debts incurred” (Saito and Villanueva 1981). Delinquency and default rates of informal lenders were generally low relative to banks in the sample countries. In Ghana, 70 to 80 percent of informal lenders had no delinquent borrowers in 1990 and 1991. In Nigeria, delinquency rates were 14 percent for moneylenders, 17 percent for ROSCAs, and 20 percent for savings collectors. In all cases, lenders were confident that delinquent borrowers would repay within three months of the loan maturing. Eventual default rates in Tanzania were as low as 0.1 percent for SCCs, 2.5 percent for ROSCAs, and 4 percent for traders and landlords. In contrast, commercial banks reported very high rates of non-performing loans, averaging 45 percent to Nigeria and over 80 percent in Tanzania.13

Some of the most disappointing bank loan repayment records were in Tanzania where poor contract enforcement characterizes the banking system and there was a serious deterioration in banks' loan portfolios in the adjustment period (state banks continued extending credit to parastatals and cooperatives, assuming implicit government guarantees). The proportion of non-performing loans for commercial banks in Tanzania was 80-86%

---

13 These problems were in large part associated with the problems of state banks lending to parastatals. Eventual default rates are difficult to estimate because of portfolio restructuring exercises, but are certain to be considerably higher than those of informal agents.
percent, and the non-performing assets of the major financial institutions was estimated as equivalent to 50 percent of their total assets.

In Nigeria, both publicly-owned and private banks were under considerable stress. With the proliferation of financial institutions following premature deregulation, the problems of moral hazard and adverse selection loomed large. The number of distressed banks doubled from eight to sixteen during 1992, and 45 percent of the total outstanding loans of the banking system were classified as non-performing. Non-performing loans of development banks were believed to amount to 80-90 percent of their loans. Some of the worst performances were observed in rural lending by large commercial banks and merchant banks.

In Ghana, formal sector default rates were not low, but there was more variation by borrower type and location than in Nigeria and Tanzania. Small agricultural loans accounted for over 55 percent of the number of delinquent loans during 1988-90 and 25 percent of total amounts in default in 1991, with actual defaults most pronounced in development bank branches and unit rural banks. Large loans accounted for 55 percent of loan amounts in default in 1991.

In Malawi, while formal sector repayment by small borrowers was poor, the scale of the problem was less than in the other country samples and concerned delinquency more than actual default (most delinquent loans were paid within twelve months). Delinquency was highest (19 percent in 1991) among household borrowers, followed by small enterprise borrowers (16 percent). Only 5 percent of agricultural loans were either delinquent or in default, comparable to 2 percent for large enterprises. The low default rates for agriculture may be because these loans were to large plantation owners.

In rural areas, non-payment was generally attributed to borrowers’ cash flow problems, while many urban lenders saw it as a mixture of cash flow problems and low commitment on the part of borrowers to settle debts. Cross-tabulations suggest that lenders providing loans for consumption purposes and trading tended to be more concerned with strategic default, while those lending to farmers were more concerned about failed projects leading to default.

**Administration Costs**

Loan administration includes the costs of screening, monitoring and contract enforcement. Loan administration costs were found to be generally lower as a percentage of loan amounts for informal lenders than for banks (Tables 3 and 4). Administration costs for rural institutions tended to be slightly higher than for urban areas in Ghana and Tanzania, but there was no clear overall pattern.

---

14 The costs of taxation and regulation (which fall only on the formal sector) were not included.
Table 3: Loan Administration Costs of Informal Institutions  
(mean percentage of loan amount)

<table>
<thead>
<tr>
<th></th>
<th>Savings and</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Credit Unions</td>
<td>Credit Cooperatives</td>
<td>Money Lenders</td>
<td>Savings Collectors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban Rural</td>
<td>Urban Rural</td>
<td>Urban Rural</td>
<td>Urban Rural</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>2.6 4.4</td>
<td>0.3 0.2</td>
<td>1.8 0.6</td>
<td>0.9 0.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malawi</td>
<td>0.4 0.1</td>
<td>0.2 0.2</td>
<td>0.6 0.6</td>
<td>n.a. n.a.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>1.9 0.6</td>
<td>1.0 0.6</td>
<td>3.2 2.7</td>
<td>0.6 0.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tanzania</td>
<td>2.5 3.0</td>
<td>0.1 0.1</td>
<td>1.7 2.6</td>
<td>n.a. n.a.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Survey data.

Table 4: Loan Administration Costs of Commercial and Development Banks  
(mean percentage of loan amount)

<table>
<thead>
<tr>
<th></th>
<th>LSEs</th>
<th>SSEs</th>
<th>SSA</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>n.a.</td>
<td>1.7</td>
<td>3.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Malawi</td>
<td>17.6</td>
<td>3.4</td>
<td>8.9</td>
<td>13.5</td>
</tr>
<tr>
<td>Nigeria</td>
<td>18.9</td>
<td>12.9</td>
<td>12.3</td>
<td>11.4</td>
</tr>
<tr>
<td>Tanzania</td>
<td>n.a.</td>
<td>12.4</td>
<td>n.a</td>
<td>n.a</td>
</tr>
</tbody>
</table>

a/ LSEs = large-scale enterprises (over 30 workers)  
b/ SSEs = small-scale enterprises  
c/ SSA = small-scale agriculture  

Source: Survey data.

The value of moneylenders' time allocated to administering loans was equivalent to only 0.6 to 3.2 percent of loan amounts across the four countries—as against 1.7 percent to 12.9 percent for bank loans to small-scale enterprises (up to 18.9 percent to large-scale enterprises). Credit unions fell within the same range, while their less formal counterparts, SCCs, were consistently lower at 1 percent or less. The cost for savings collectors was low (under 1 percent) because their savings mobilization activities and records gave them all the information they needed to process loan requests and loan collection occurred as part of their regular deposit-taking. The part-time nature of informal lending and the lack of overheads help explain the relatively low costs.

Most of the costs of informal lenders were incurred in pre-screening clients. These efforts focused on the client's ability to repay, not the particular use of the funds. Informal lenders showed little interest in how loans would be used, though they were concerned about the health of the applicant's income-earning activities.\(^\text{15}\) Group-based cash loans were generally reported to be for consumption purposes, including emergencies such as funerals and school fees. The principal exceptions were traders and landlords, who often financed inputs in kind or in cash, and savings collectors, whose clients were most often market traders.

\(^{15}\) Informal sector cash loans were generally reported to be for consumption purposes, including emergencies such as funerals and school fees. The principal exceptions were traders and landlords, who often financed inputs in kind or in cash, and savings collectors, whose clients were most often market traders.
schemes such as SCCs, ROSCAs and credit unions did not generally have creditworthiness criteria. Rather, they were oriented toward rotating or rationing the available funds among members.

All the bankers surveyed viewed the return on projects as the most important criterion of credit-worthiness. Feasibility studies and project site visits raised screening costs for banks, which viewed time spent in verifying information for project analysis, with its associated salary and support costs, as the largest single impediment to lending to small borrowers. Theory suggests that repetitive games can reduce loan screening costs. This was partially borne out by bank lending patterns in the study countries. In Nigeria, for example, banks were more likely to have a long-standing relationship with their large clients than with small borrowers, and both commercial and merchant banks had far fewer first-time borrowers than repeat borrowers. The same situation was found in Ghana, especially for large borrowers.

In contrast, many informal lenders made no pretense about evaluating projects, as they do not have adequate information to do so and know that the borrowed funds may be put to other uses. Screening in the informal sector relies extensively on personal knowledge of borrowers rather than the application-based, projected-oriented procedures employed by banks (Udry 1990; Yotopoulos and Floro 1991). The development of personal ties and proximity are mechanisms for countering the effects of adverse selection and moral hazard. Familiarity with a borrower reduces the significance of repeat borrowing, and a repetitive relationship becomes important only if the lender has no other means for verifying information about a borrower.

The survey data do not validate the popular assertion that small loans cost more for banks to transact than larger ones. Overall administration costs are correlated more with the degree of centralization of decision-making, as greater centralization increases screening costs. The large cost differential between small enterprises and large ones for loan administration in Malawi is directly related to the degree of centralization of decision-making between the two types of loans, as the amounts sought by small enterprises often fell within the lending limits of branch managers. Much higher loan administration costs incurred by Nigerian banks across different borrowers types are attributable to more centralized decision-making, larger overheads and larger branch networks than their Ghanaian counterparts. The high loan administration costs for the small enterprise sector in Nigeria result from the greater proportion of merchant banks engaged in this type of lending. Staff costs as a percentage of outstanding loans for merchant banks were 27 percent compared to 3-5 percent for commercial banks across the different borrower categories (World Bank 1994). The higher administration costs for Nigerian banks and Tanzanian banks may also reflect the slow progress in financial sector reforms in both countries.

The cost structure reflects the relative importance attached to the different components of risk management. In Ghana, commercial banks concentrated more on
screening. An exception to this was for small agricultural loans, where all banks allocated an average of 40 percent of the resources to monitoring of loans, more than double the share for other types of loans. In contrast, Nigerian banks spend proportionately less on screening and incurred higher costs on loan monitoring and contract enforcement. Nigerian banks spent less than 15 percent of loan administration costs on screening, with the remaining 85 percent spent almost equally on monitoring and enforcement. This may be attributed to a more pervasive fear of moral hazard and willful default in Nigeria.

The bank branch survey revealed little evidence of extensive loan monitoring in Ghana, Nigeria and Tanzania. Greater emphasis was often placed on the monitoring of accounts than on the projects themselves. The lack of extensive project visits was the result of pressures on banks to cut their costs as they tried to reform, not an indication of a lack of concern about moral hazard. Also many banks (particularly state-owned) in Africa lack vehicles for regular project visits. Only in Malawi did loan monitoring dominate the loan administration process, mainly because agricultural borrowers are usually large plantation owners and are within easy reach of urban bank branches.

On-site loan monitoring was also relatively rare among informal lenders. In Tanzania, only 17 percent of traders and landlords, 11 percent of SCCs, and 20 percent of ROSCAs reported any visits to clients. In Ghana, only 5 percent of moneylenders and 28 percent of credit unions regularly followed up that loans. For West African savings collectors, loan monitoring was implicit in their daily visits to collect deposits (repayments) from clients. Contract enforcement costs were low both because of high repayment rates by informal clients and because lenders drew more on existing social relationships than on costly legal methods.

Total Cost of Lending

Total transaction costs including default risk were available in detail only for banks in Ghana (Table 5). For all types of borrowers, the transaction costs were highest for development banks, although their loan administration costs per branch were lowest. Clearly, their loan administration methods put considerable premium on default risk, as high provisions for bad debts significantly pushed up their lending transaction costs. In general, the financial reform programs induced banks to make large provisions for loan losses, reversing the previous tendency to underestimate defaults.

The average total lending transaction costs for small enterprise lending and small agricultural loans in Ghana was comparable to those observed by Saito and Villanueva (1981) among similar borrowers for development banks in the Philippines, except for large

16 Many commercial banks in Ghana insisted that a more thorough screening process results in relatively low default rates and less enforcement costs. This, however, has led to relatively few loan approvals by commercial banks, pointing to their high risk aversion.
enterprises (4.9 percent of loan amount in Ghana as against 2.1 percent in the Philippines). Ghana’s average transaction costs in the range of 5-7 percent of loan amount accounted for less than half of bank interest rate spreads. Thus, high spreads may largely reflect a lack of competition among banks.

Table 5: Transaction Costs of Lending in Ghana as a Proportion of Total Loan Amount for Sector by Type of Bank

<table>
<thead>
<tr>
<th>Bank Type</th>
<th>SSEs</th>
<th>LSEs</th>
<th>SSA</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Bank</td>
<td>3.2</td>
<td>1.8</td>
<td>6.4</td>
<td>4.1</td>
</tr>
<tr>
<td>Development Bank</td>
<td>8.7</td>
<td>8.0</td>
<td>10.6</td>
<td>8.2</td>
</tr>
<tr>
<td>Unit Rural Bank</td>
<td>5.8</td>
<td>--</td>
<td>3.9</td>
<td>3.0</td>
</tr>
<tr>
<td>Overall</td>
<td>5.9</td>
<td>4.9</td>
<td>6.9</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Source: Calculated from survey data and bank balance sheets.

The cost of lending also depends on the cost of funds, including interest payments on deposits, returns on alternative investments (the opportunity costs of lending) and interest payments on loans taken for lending. Banks’ cost of funds in 1992, as indicated by deposit rates (with GDP deflator inflation rates in parentheses), were: Ghana 16 percent (13 percent); Malawi 17 percent (18 percent); Nigeria 18 percent (65 percent); and Tanzania 22 percent (19 percent). The study found no evidence that informal lenders had access to bank loans for on-lending. Most informal financial units mobilize their own funds, usually at very low cost. The opportunity cost of funds for informal institutions thus depends mainly upon where lenders would have invested otherwise. For ROSCA members, low opportunity cost can be inferred by the fact that their operations remain sustainable even though no interest is paid on the funds deposited by members (bank’s minimum balance requirements exclude members from individual interest-bearing savings accounts). Savings collectors have a negative cost of funds. For example, Ghanaian susu collectors receive payment for taking deposits, which they then deposit at a bank or lend out. For a typical one-month loan from a susu collector in Accra, the total transaction cost was

---

17 They only earn interest on deposits with the bank if their balances exceed 1 million (about US$ 2,500) continuously for half of the year, which means that there is usually no interest foregone. Aryeeetey and Steel (1995) measured the cost of funds as the implicit daily interest rate on fixed deposits accumulated over 30 days, or -0.2 percent, representing the collectors' fee. This was equivalent to -6.3 percent of average loan amount per month.
equivalent to -5.3 percent of loan amount. Considering the monthly lending rate of 3.3 percent, there was a large spread of more than 8 percentage points.\textsuperscript{18}

The opportunity cost of funds for moneylenders who were also traders was low because they generally lent out temporarily idle funds. Their good repayment record suggests that their risks were effectively contained, and the default risk was not high.

**Efficiency of Informal Markets**

Substantial segmentation of financial markets was observed, as informal and formal lenders largely pre-select their client groups according to the availability of information and ability to manage risk using a specific methodology and loan or savings product. Informal institutions are highly specialized, often concentrating on one side of the market and focusing on a particular client group rather than using interest rates to discriminate between clients. Their relatively low transaction costs and loan losses in serving clients who lack access to the formal banking system indicate that they provide a reasonably efficient solution to the information and enforcement problems that characterize African economies. They perceive their pre-selected clientele as low risk, even though formal lenders would perceive them as high risk.

The evidence indicates that these segments were fragmented, not integrated. Formal and informal lenders are polarized at extreme ends of the market, with relatively little overlap of clientele. Excess demand and gaps still exist. Small- and medium-scale enterprises (SMEs), for example, generally are underserved by formal banks but demand larger, longer-term or cheaper loans than informal lenders can provide. Each informal institution selects a narrow range of clientele. Although some informal agents help link households and small businesses to the formal financial system through their deposit mobilization activities, this is a one-way link and there is virtually no linkage on the credit side.

Furthermore, risk-adjusted returns do not appear comparable across segments. While informal interest rates are generally much higher than those of formal lenders, they have both lower transaction costs and lower default rates. Among informal lenders, the variation of rates is much wider than the variation in transaction costs and default rates. Informal loans are usually secured (through personal guarantees if not through physical property), and, given the inadequacy of legal systems, informal lenders appear better able to enforce collateral than banks. Although the opportunity cost of funds could not be measured comparably across segments, it seems unlikely to account for the wide variations in interest rates. Hence the relatively high rates of some moneylenders are

\textsuperscript{18} For other informal lenders in Ghana, the cost of funds was usually no more than 0.1 percent, thus giving them substantial spreads. In Malawi, also, the cost of funds for all informal lenders was estimated to be insignificant.
likely to represent substantial monopoly power regarding borrowers who lack access either to formal credit or to membership-based informal finance.

Cross-country differences may be interpreted in relation to the degree of competition in financial markets. The relatively high moneylending and SCC rates in Malawi are associated with the limited alternatives in that country, while Ghana and Nigeria, with a wider range of informal and semi-formal institutions, had lower average rates. Tanzania's relatively low rates may be explained by the availability of linked loans at even lower rates.
VI. FINANCIAL SECTOR RESPONSES FOLLOWING REFORMS

In this section, we investigate the financial repression hypothesis, given the introduction of liberalization measures, in terms of deposit mobilization, financial deepening, trends in lending and intermediation, and interest rates and spreads. Reformers expected that depositors would switch to interest-bearing, longer-term deposits and the banks would increase their lending to the private sector, including small enterprises. They also expected interest rate spreads to diminish and the importance of informal financial markets to dwindle.

Financial Deepening and Deposit Mobilization

The countries studied made little progress in savings mobilization, with fluctuating growth in numbers of depositors and deposit sizes following the introduction of reforms. Figs. 1. a-d show little net change in deposit mobilization by banking institutions, as measured by the ratios of currency in circulation, M1 and M2 to GDP. The M2/GDP ratios of the sample countries—31 percent for Tanzania over the period 1987-92, 15-21 percent for the others—lie below those for countries of comparable income per capita from other regions, such as Bangladesh (33 percent), India (48 percent), Pakistan (43 percent), and Honduras (31 percent).

Ghana's financial depth remains the lowest among the case study countries, despite some improvements since the mid-1980s, and is still far below the levels attained in the 1970s. Though Malawi has achieved a greater financial depth than Ghana, the pattern was likewise one of recovery after an initial decline following liberalization, with no definite trend between 1975 and 1992. Since 1980, Malawi's currency/M2 ratio has remained under 5 percent, although non-transaction demand for money (the difference between M2 and M1) is higher than in the other three countries, accounting for 10-14 percent of GDP.

In Nigeria, the financial deepening indicators have been affected by the difficulties experienced after liberalization attempts. Fig. 1c shows that both M2/GDP and (M2-M1)/GDP ratios declined sharply in the late 1980s. This is partly due to the government's abrupt decision to withdraw public sector deposits from the banking system. Although these ratios have since recovered, Nigeria's process of financial deepening appears to have stalled in the 1990s. Though Tanzania had a higher M2/GDP ratio than the other study countries

---

19 It should be stressed that financial sector reforms are an on-going process, encompassing wide-ranging measures rather than just liberalization of interest rates and credit allocation. As the breadth and depth of financial reforms varied considerably across the case-study countries, it is inappropriate to make a final conclusion on the outcome of reforms per se. It is now widely accepted that financial reform is a lengthy process, requiring progress in institution building, as well as policy liberalization.
in the late 1970s, the banking system lost ground in savings mobilization in the initial years of economic reform (1984-88). Recently, currency accounted for over a third of M2, and the non-transaction demand for money has declined noticeably.

Figure 1a. Financial Deepening Indicators: Ghana

Figure 1b. Financial Deepening Indicators: Malawi

Sources: IMF, IFS; Bank of Ghana, Quarterly Economic Bulletin.

Sources: IMF, IFS; Bank of Malawi, Economic Bulletin.
Figure 1c. Financial Deepening Indicators: Nigeria

Sources: IMF, IFS; Central Bank of Nigeria, Economic and Financial Review.

Fig. 1d. Financial Deepening Indicators: Tanzania

Sources: IMF, IFS; Bank of Tanzania; Economic and Operations Report.
The liabilities of banking institutions continued to be dominated by liquid short-term instruments during the reform period, although there was a general trend toward a smaller share of demand deposits (Table 6). In Malawi, a greater shift in favor of longer maturities might have been observed had commercial banks not set interest rates lower on time deposits than on shorter maturities. In Nigeria, however, the share of time deposits fell by 15 percentage points between 1980 and 1992. Further, half of all time deposits in Nigerian commercial banks mature in three months or less, suggesting a strong preference for liquid assets. Only in Tanzania was demand for time deposits clearly both strong and rising.

### Table 6: Changes in Composition of Bank Deposit Liabilities
(Percent of total deposits)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Deposits</td>
<td>71</td>
<td>57</td>
<td>40</td>
<td>38</td>
<td>48</td>
<td>44</td>
<td>67</td>
<td>45</td>
</tr>
<tr>
<td>Savings Deposits</td>
<td>28</td>
<td>34</td>
<td>15</td>
<td>34</td>
<td>10</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time Deposits</td>
<td>1</td>
<td>8</td>
<td>60*</td>
<td>62*</td>
<td>37</td>
<td>22</td>
<td>23</td>
<td>30</td>
</tr>
</tbody>
</table>

*Figures are for both time and savings deposits.

Source: Aryeetey 1996; Bagachwa 1996; Soyibo 1996b; The figures for Malawi are calculated from Review of Finance and the Economy, Reserve Bank of Malawi.

In sum, the deposit base of banking institutions continued to be volatile, with only limited change observed in liability structure. Few innovative products were being developed to reach untapped segments of the financial market.

### Resource Mobilization by Informal Financial Institutions

In contrast to the disappointing performance of the formal financial sector following reforms, the survey results show that informal financial institutions in all four countries responded dynamically to increased demand for their services in the liberalized environment. The capital base of moneylenders in Nigeria grew by 264 percent over two years (1990 to 1992) and that of savings and loan companies by 148 percent. In Malawi, the combined average increase was 73 percent over two years.

Survey data revealed substantial evidence of increased deposits in informal sector institutions. In Tanzania, the total volume of deposits in the SCCs surveyed rose by 67 percent and in ROSCAs by 113 percent (both faster in rural areas) from 1990 to 1992 (inflation was 22 percent over this period), due to increases in both members and average

20 Determining national trends in aggregate deposits is difficult because of seasonal and annual fluctuations in amounts reported and the absence of nation-wide data. Indications were that the number of informal institutions was increasing in all countries, thus multiplying the increases per institution reported from the survey data.
deposit size. In Nigeria, deposits in credit unions rose by 100 percent, in SCCs by 56 percent, and in ROSCAs by 77 percent over the same period. In Malawi, community funds' deposits grew by 44 percent from 1989 to 1991 and those of ROSCAs by 45 percent (both faster in urban areas; inflation was 12 percent), mainly from additional members. Malawian SCCs grew more slowly and average members declined slightly in urban areas.

Savings collectors increased their clientele and deposits in the period following liberalization. The average number of clients per collector surveyed rose from 250 in 1990 to 438 in 1992 in Nigeria and from 155 to 290 in Ghana, and average monthly deposits rose by 51 percent in Nigeria and 64 percent in Ghana (inflation during the period was 95 and 36 percent, respectively). The level and growth of monthly deposits mobilized per susu collector was especially high in urban areas such as Accra (rising by 24 percent in real terms to $7,918 in 1992).

Trends in Lending

Efforts were made to restructure bank loan portfolios to expunge non-performing loans, often largely accounted for by public enterprises, and to enable banks to resume lending to private enterprises. While the share of the private sector in lending by commercial banks is generally on the increase in Ghana and Tanzania, lending to the public sector remains high, reflecting past development strategy (Table 7). The size of private sector credit in relation to GDP is still extremely low in the early 1990s. The share of the private sector is higher in Malawi and Nigeria, as the private sector was more favored in bank lending, but contracted in both countries during 1987-92. Despite these limited signs of improvement in private sector shares of credit, slow growth of credit overall meant that the ratio of private credit to GDP actually fell in Malawi, Nigeria, and Tanzania, and remained relatively low in Ghana at 4 percent. Indeed, in all four countries, the ratio of private sector lending to GDP was remarkably lower (2 percent to 11 percent) than in many countries with comparable income per capita, for example, 50 percent in Indonesia and 20 percent in Kenya.

There was also little change in banks' lending profile within the private sector portfolio. Banks continued to concentrate lending on their traditional large, established customers. The preferred loan composition of banks was heavily weighted against small-scale enterprises and small farmers. In Ghana, large enterprises (thirty or more workers) took as much as 74 percent and 50 percent of loans extended to the private sector by commercial banks and development banks, respectively. In Malawi, the small enterprise sector (under 30 workers) received only 15 percent of total loan volumes in 1992, while large enterprises received 63 percent of total loans disbursed. In Tanzania, the loan approval rate was low for small borrowers: only 10 percent of loan applications in regional urban branches were approved in 1992 and less than 3 percent in small rural towns. Only in Nigeria was there little disparity in allocations between the small and large enterprise sectors, although large enterprises continued to receive a greater share of total loans disbursed.
Table 7: Credit Allocation between the Private and Public Sectors

<table>
<thead>
<tr>
<th>Year</th>
<th>Ghana</th>
<th>Malawi</th>
<th>Nigeria</th>
<th>Tanzania</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of Credit to the Public Sector in Total Credit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1981-1986</td>
<td>86.3</td>
<td>63.3</td>
<td>55.3</td>
<td>94.8</td>
</tr>
<tr>
<td>1987-1992</td>
<td>74.5</td>
<td>53.6</td>
<td>50.3</td>
<td>61.6</td>
</tr>
<tr>
<td>Private Sector Lending in Total Commercial Bank Lending</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td>13.6</td>
<td>39.4</td>
<td>47.2</td>
<td>7.2</td>
</tr>
<tr>
<td>1990</td>
<td>27.6</td>
<td>52.5</td>
<td>63.5</td>
<td>14.6</td>
</tr>
<tr>
<td>1993</td>
<td>35.8</td>
<td>40.4</td>
<td>44.9</td>
<td>27.1</td>
</tr>
<tr>
<td>Ratio of Private Sector Credit to GDP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1981-1986</td>
<td>2.4</td>
<td>14.6</td>
<td>17.4</td>
<td>2.3</td>
</tr>
<tr>
<td>1987-1992</td>
<td>4.1</td>
<td>9.1</td>
<td>11.3</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Source: Computed from various annual reports from relevant central banks.

In sum, despite liberalization and attempts to introduce greater competition, formal finance has not become more accessible to a broad section of the real economy. Sectoral credit distribution continues to be dominated by short-term trade credit, as in Ghana and Nigeria, or by financing the processing and marketing of agricultural exports, as in Malawi and Tanzania. Usually, only the largest manufacturing firms receive credit from banks (smaller firms have some access in Nigeria). Other characteristics of formal sector loans, such as maturities and real average loan sizes, have hardly changed since the reforms were initiated.

**Informal Credit Demand and Supply**

Strong increases in the number of loan applications received and approved were observed for almost all informal lenders in the sample countries, with the exception of the relatively small credit unions in Nigeria and community funds and savings and credit cooperatives in Malawi (Table 8). The activities of moneylenders (including traders and landlords) increased sharply in all countries. In many cases, loan approval rates rose along with the number of applications, implying an increase in the supply of funds as well as the demand. Nevertheless, substantial excess demand was reported. For example, 42 percent of moneylenders and 40 percent of susu collectors in Ghana were unable to satisfy all the loans demanded by clients they considered creditworthy.
### Table 8: Number of Loans Approved Annually by Type of Informal Lender (mean)

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>1992</th>
<th>Growth 1990-92 (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Savings Collectors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>70</td>
<td>88</td>
<td>26</td>
</tr>
<tr>
<td>Nigeria</td>
<td>33</td>
<td>83</td>
<td>152</td>
</tr>
<tr>
<td><strong>Moneylenders</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>70</td>
<td>94</td>
<td>20</td>
</tr>
<tr>
<td>Nigeria</td>
<td>27</td>
<td>62</td>
<td>130</td>
</tr>
<tr>
<td>Malawi</td>
<td>44</td>
<td>70</td>
<td>59</td>
</tr>
<tr>
<td>Tanzania (landlords)</td>
<td>56</td>
<td>88</td>
<td>57</td>
</tr>
<tr>
<td><strong>Traders</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malawi</td>
<td>60</td>
<td>104</td>
<td>73</td>
</tr>
<tr>
<td>Tanzania</td>
<td>50</td>
<td>80</td>
<td>60</td>
</tr>
<tr>
<td><strong>SCCs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>42</td>
<td>37</td>
<td>-12</td>
</tr>
<tr>
<td>Nigeria</td>
<td>49</td>
<td>66</td>
<td>35</td>
</tr>
<tr>
<td>Malawi</td>
<td>11*</td>
<td>9</td>
<td>-18</td>
</tr>
<tr>
<td>Tanzania</td>
<td>2538</td>
<td>3036</td>
<td>20</td>
</tr>
<tr>
<td><strong>Credit Unions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>226</td>
<td>395</td>
<td>75</td>
</tr>
<tr>
<td>Nigeria</td>
<td>21</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>Malawi (community funds)</td>
<td>21</td>
<td>22</td>
<td>5</td>
</tr>
</tbody>
</table>

*1991 data.

Source: Survey data.

The size of loans varied widely both within and across types of lenders. Loans by urban moneylenders ranged from $50 to $1000, with a median of about $250. Urban loans were significantly larger than rural loans; for example, an average of $340 in Accra as against $30 in rural Ghana. When savings collectors lent, the amounts were much smaller (in the order of $30), since they usually only advance one month's savings. Loan sizes from SCCs and credit unions depended heavily on the size of the organization; in Ghana they ranged from $3 to $1000 for SCCs and $7500 for credit unions (averaging $188 and $112, respectively).

Analysis of the results suggests that the growth in operations of the informal agents surveyed was related much more to the growth of the real economy than to
financial sector developments. In Tanzania, for example, trader-lenders and landlords obtained about 35-40 percent of their loan capital from other economic activities, and 85 percent reported that their capital base had been growing. Liberalization of grain markets during the 1980s in particular fostered "a new class of traders that provides short-term financing for crop purchasing and financing."21 In Ghana, the increased market activity resulting from liberalization of product markets and increased imports associated with structural adjustment expanded the savings mobilized by susu collectors and the profits of larger trader-moneylenders.

**Interest Rates and Spreads**

Under liberalized policies, formal sector lending and deposit rates were expected to settle at a market-clearing level. An initial increase in the spread between lending and deposit rates was expected, as banks needed time to reshape their cost structures. The spread was then expected to narrow as more efficient business practices were adopted under increasing competition.

However, lending rates and spreads have remained persistently high during the reform years in many countries (Table 9). While there is no universally accepted timeframe for the reduction of spreads, a three-year period to restructure ailing banks is reasonable. In most cases, high spreads have persisted more than seven years after reforms began. The ratio of average spread to lending rate remained the same between 1987 and 1992 in Malawi (0.3) and Tanzania (0.5) and rose in Ghana (from 0.4 to 0.5). This trend in spreads indicates low competition in financial markets and high cost of funds and transaction costs in bank lending.22 Thus, there is little evidence of improved efficiency of intermediation in the banking sector.

In some cases, moneylenders' interest rates came down following financial sector reforms. However, respondents associated these changes, not with prevailing interest rates or competition, but with the increased supply of funds from liberalized trade (for moneylenders whose primary activity was trading) and with the inability of many clients to pay high ‘traditional’ rates.

---


22 On top of nominal lending rates, many banks impose servicing fees, equivalent to an extra 2-5 percent. High reserve requirements intended to absorb excess liquidity in Ghana could also explain high spread. However, banks voluntarily held reserve instruments well in excess of requirements, indicating that excess liquidity persisted despite high spreads.
Table 9: Interest Rates and Spreads in Sample Countries
(percent per annum)

<table>
<thead>
<tr>
<th>Country</th>
<th>Average Fixed Deposit Rate</th>
<th>Average Lending Rate</th>
<th>Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>19.0&lt;sup&gt;a&lt;/sup&gt;</td>
<td>15.0&lt;sup&gt;a&lt;/sup&gt;</td>
<td>30.0&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Malawi</td>
<td>-</td>
<td>14.3</td>
<td>16.5</td>
</tr>
<tr>
<td>Nigeria</td>
<td>13.1</td>
<td>18.0</td>
<td>--</td>
</tr>
<tr>
<td>Tanzania</td>
<td>14.5</td>
<td>16.0</td>
<td>29.0</td>
</tr>
</tbody>
</table>

<sup>a</sup>Minimum on six-month deposit rate.
<sup>b</sup>Maximum secured lending rate.

Source: Calculated from annual reports from relevant central banks.

Portfolio Management

Reform measures had limited impact on banks' portfolio management at the time of the study, and bank balance sheets remained precarious. Even in Ghana and Malawi, where reforms were relatively orderly, most banking institutions continued to operate in an extremely constrained environment, with underdeveloped market-supporting infrastructure and a poor information base. In Nigeria and Tanzania, banks' net worth deteriorated in the adjustment period through imprudent asset management, albeit under different circumstances.

The portfolios of banking institutions were continuously dominated by two characteristics: an extremely high incidence of non-performing loans and excess liquidity. Banks had not changed their operational practices, still basing portfolio decisions on parameters such as risk-averseness, net worth and asset quality, nor had intermediation efficiency changed in terms of interest rate spreads and loan transaction costs. Lending remained constrained by external factors such as a poor information base and policy uncertainty, resulting in a 'low-lending trap' despite latent excess demand for credit—particularly by small-scale enterprises (SSEs) with good opportunities but insufficient collateral. Indeed, in Ghana “between 1985 and 1990, the share of indigenous manufacturing sale proprietorships in total domestic credit dropped” (Ayeetey 1993). Furthermore, de facto crowding out of the private sector persisted in many countries because of the presence of high-yielding government securities.

While many informal agents grew along with demand for their services, they faced difficulties moving beyond their particular sphere of specialization. In general, the liability base of informal lenders is narrow, limited to deposits from a specific group of people or surplus income earned by the lender from other economic activities. For example, the lending base of each SCC depends on incomes of members, the frequency
of deposits, and membership size within which it can retain cohesion in its operation. Its ability to meet growing demand for credit is therefore limited without recourse to external sources of finance. But there was very little evidence of SCCs or informal agents borrowing externally to lend to their clientele. Their average loan sizes remained far smaller than those of banks while the maturities of their loans tended to be shorter, and the demand for medium-sized, medium-term loans remained largely unsatisfied as both formal and informal segments of the financial system continued to serve their narrow market niches.\footnote{Urban informal loan sizes in Sub-Saharan Africa generally were between $30 and $1000 with a median value of about $250, and grew only marginally in many cases since reforms began. In general, the sizes of loans from moneylenders tended to be the largest in the informal sector. Urban loans were also significantly larger than rural loans. The average loan size by savings collectors was $30 to regular clients in 1992 in Accra and the largest monthly advance was $300. The average amounts granted to successful applicants by SCAs generally lay between the amounts that could be borrowed from savings collectors and moneylenders.}
VII. FINANCIAL GAPS AND NEW INSTITUTIONAL DEVELOPMENTS

Financial systems in the countries studied have failed to capitalize on the advantages each segment displays in dealing with its particular clientele, and each segment appears to struggle with its respective operational constraints. Direct institutional linkages between and within different segments are insignificant. There are direct deposit links between some informal agents and banks. However, the savings of informal agents are kept in non-interest bearing demand deposits for safe-keeping, and are seldom intermediated for investment due to conservative asset management on the part of banks. There are few direct linkages in credit allocation between banks and traditional informal operators. Indirect market links among different segments of financial markets are also weak, with an extremely narrow range of overlapping demand for financial services.

We observed little complementarity or competition in financial market relationships. Earlier surveys (Aryeetey and others 1994; Parker, Riopelle and Steel 1995) found no de facto financial intermediation through on-lending by large enterprises to smaller sub-contractors, as occurs in some Asian countries (Biggs 1991), reflecting the limited scope for backward and forward linkages in real sector activities in Sub-Saharan Africa. With few interactions among segments, the scope for information sharing has been limited and there is no mechanism for risk pooling and sharing across segments. With financial units specializing in a very narrow range of financial products and market niches, considerable gaps in financial services exist. The financing gaps include all those potential borrowers that are too small for or fail to meet collateral requirements of formal lenders but demand larger or longer-term loans than informal lenders can provide. This ‘credit gap’ particularly constrains small enterprises (SSEs) with growth potential, and corresponds to the ‘missing middle’ in the literature on enterprise development in Africa.

Financial sector reforms so far have had little effect in closing this gap through existing institutions. Banks remain focused on large customers, and survey data show that growing small enterprises get very little finance from informal sources (Aryeetey and others 1994; Biggs, Shah and Srivastava 1995). Although informal units have the potential to lend to small businesses, their operations are limited by a restricted capital/deposit base and financial products that do not meet the requirements of SSEs. Informal finance tends to go to consumption purposes or working capital for micro owner-operated businesses.

Nevertheless, there are some positive signs in the emergence of a number of non-bank financial institutions, particularly semi-formal institutions in West Africa. These have led to increased competition, which has driven down interest rates charged by moneylenders and begun to fill underserved market niches.

For example, susu companies (employing individual collectors) emerged as a new source of semi-formal finance in Ghana as the economy started to recover, guaranteeing their depositors credit after six months of regular deposits. However, following their failure
to screen loans and meet increasing demands on their liquidity, many collapsed. Subsequently, better-organized companies with a greater link to the banking system began to emerge under the 1993 Financial Institutions (Non-Banking) Law, although many have had difficulty meeting minimum capital and other requirements not adapted to their circumstances. One NGO has adopted savings collectors' methods. A savings and loan company serves the financing needs of market women and other small businesses through innovative instruments.\textsuperscript{24} It is linked to the banking system through accounts with two commercial banks, on which the company issues checks. As a trusted client of those banks, it can, in principle, finance its lending to borrowers by overdrawing its commercial bank accounts. The company is also negotiating with various formal creditors to become an on-lending agent.

Finance houses in Nigeria are privately-owned investment companies engaged in services such as provision of loans, hire purchase, equipment leasing, factoring, project financing and debt administration. They differ from banks in that they are not allowed to take regular deposits. For their liabilities, they can only 'borrow' amounts not below ₦100,000 (US$4,500 in 1993) from customers. Their high 'dividend' rates (40-50 percent in 1993) enabled many to build up their capital base rapidly, from both the banks and the non-bank public. They create their assets by granting credit, placing funds with other formal financial institutions, and investing in approved business ventures.\textsuperscript{25} Finance houses have a high risk exposure by lending short- and medium-term funds to clients who often would not satisfy the collateral requirements of conventional banks. SSEs in Nigeria patronize them heavily. At their peak, their assets were comparable in size to those of the banking system (Soyibo 1996b).

Nevertheless, efforts to fill gaps in the financial system have often had difficulties. Attempts to establish unit banks in rural areas of both Ghana (Rural Banks) and Nigeria (Community Banks) have had only limited success, with high rates of distress resulting from high costs and management problems. Malawi’s Investment and Development Fund and Small Enterprise Development Organization have incurred substantial losses in trying to serve indigenous SMEs, in part because they also provide costly training, technical assistance and advisory services.

\textsuperscript{24} For example, market women were encouraged to deposit their daily turnovers at the close of the market day and withdraw what they need the following morning—essentially an overnight safety deposit box at no cost. At the beginning of 1994, depositors received interest of 20 percent on savings accounts and 28 percent on twelve month fixed deposits, much higher than the deposit rates of commercial banks. Customers could use their savings accounts as collateral without additional forms of security to obtain working capital or hire-purchase loans. Short advances to purchase produce at the farmgate were treated as overdrafts at a daily interest of 0.75 percent.

\textsuperscript{25} They cannot issue checks to customers and are barred from trading in such specialized areas as foreign exchange. They also cannot participate in clearing house activities.
It is critically important to address the issue of regulations governing such semi-formal operations. Optimal regulations must be devised that are prudential but which will not debilitate their development. As witnessed in Nigeria and Kenya, without appropriate regulation on capital adequacy ratios and reserve requirements, high risk exposure could lead to high failure rates, destabilizing the entire financial system. In the absence of adequate prudential regulations, some of these newly-established unregulated institutions tend to engage in a sort of ‘pyramid scheme’ to meet growing credit demands, resulting in severe liquidity problems and, eventually, collapse.

Other non-bank financial institutions appearing on the financial landscape in Ghana include leasing companies, finance companies, venture capital schemes, insurance companies, discount houses and a stock exchange. However, they do not appear to be substantially filling the gap identified. Leasing companies and venture capital schemes are mainly interested in the upper end of the market where banks have always operated. Similarly, the semi-formal savings and loan companies tend to compete with susu collectors for the smallest depositors and borrowers. The new developments are yet to meet the demand from growing small enterprises and other undeserved groups. Filling this gap may require incentives for the banking sector to solicit smaller clients, and support for informal and semi-formal institutions to expand their reach.
VIII. Conclusions and Policy Implications

Fragmentation of financial markets in the countries studied has persisted more than seven years after financial policy reforms were initiated both because implementation of reform programs has been incomplete and because they did not adequately address underlying institutional and structural constraints. Reforms have focused on the formal financial sector. But our study shows that simply removing financially repressive policies is not sufficient to increase financial depth or to induce banks to reach a wider clientele. In contrast, informal financial agents have responded positively to demand from clients who continued to lack access to formal finance. Expansion of demand and supply in informal markets appears related more to growth of real sector activities than to changes in financial policies. This is, in part, attributable to their serving different clientele and to the persistent lack of linkages between informal and formal institutions. Moneylenders rarely access bank credit for on-lending. The principal linkage is in savings mobilization, through deposits in banks by savings collectors.

In the prevailing situation of imperfect information and uncertainty, informal financial agents demonstrate a comparative advantage in serving the large share of African populations who have little access to formal intermediaries. Informal financial institutions use a variety of specialized methodologies to mitigate the problems caused by information asymmetries and to contain risks and transaction costs. Contrary to the perception that costs and risks are higher for small clients, the transaction costs and default rates of informal institutions were found to be lower than those of banks.

In the medium term, expanding the role of informal institutions appears to be an efficient way to reduce financial dualism and increase access of the broader population to financial services. This does not mean that the informal sector can lead long-run financial development, but that it can reduce the effects of financial dualism while structural and institutional constraints are being addressed for formal institutions to deepen and widen their reach. Policies to enhance the role of informal markets include incentives for closer linkages between formal and informal institutions and a supportive legal and regulatory framework.

Formal financial deepening is evidently a long-term process that also requires a sound macroeconomic environment, stronger regulatory and supervisory frameworks, improved information flows, and legal and judicial reforms to facilitate contract enforcement. Until costs to formal institutions of acquiring information and enforcing contracts are significantly reduced, informal financial institutions will retain a comparative advantage in their market niches. For some time to come, the efficiency of the financial system as a whole can be improved by enabling informal and emerging semi-formal financial institutions to function and better integrate with the rest of the system.
It is now widely recognized that extensive institution building efforts must be part of effective financial reform programs in Africa. The areas most commonly addressed are the regulatory and supervisory framework and the soundness of bank portfolios. But experience shows that implementation can be very slow (for example, Tanzania). Sustaining macroeconomic stability can also be difficult (even in Ghana, one of the best African performers). Until these basic conditions are well established, proceeding too quickly with liberalization can have adverse repercussions on financial stability (as in the case of Nigeria). Hence a sensible approach is "cautious gradualism on deregulation of interest rates and portfolio restrictions, but prompt moves on institution building" (Caprio, Atiyas and Hanson 1994).

Reform of the regulatory and supervisory system should not only address formal institutions but treat different tiers of the financial system in terms of their distinct characteristics, the likely benefits of regulation, and the ability to regulate effectively. A balance is needed between encouraging innovative institutions such as are emerging in some countries (especially in West Africa) and regulating those that are sufficiently large to come under the purview and competence of formal financial authorities. Most African supervisory authorities know little about informal activities and frequently apply repressive measures—which tends to reinforce dualism by making informal activities illegal.

A differentiated regulatory structure permits more innovation outside the formal sector and makes it easier for successful institutions to move to higher levels. Regulations should apply with gradually increasing stringency as institutions grow in size and formality. This may mean unfettered operation at the lowest informal niches—for example, closed membership groups such as ROSCAs and small bilateral transactions such as savings collectors and moneylenders. Self-regulation and some registration requirements may be appropriate for small semi-formal activities, such as savings and credit associations and NGOs providing credit. Full registration and prudential regulation become important when non-bank financial institutions are large and sufficiently connected to the formal financial system that their failure could affect it. South Africa has adopted a multi-tiered system along these lines.

The study findings indicate that incentives and support for linkages among segments may be needed to accelerate integration of formal and informal financial institutions. Greater flows between segments would help equalize risk-adjusted returns by drawing on the comparative advantages of each. For example, savings collectors could expand credit to their clients—largely women traders—if they had recourse to a commercial bank line of credit, and the resulting increase in business would increase the savings that they mobilize for deposit in commercial banks. Better linkages would enable banks to benefit from the outreach and local knowledge of informal agents, expanding financial savings mobilization and credit delivery and improving the overall efficiency of the financial system. Banks could make it easier for savings collectors to make deposits, and complete the linkage by granting them overdraft facilities, enabling them to respond further to prevailing excess demand by creditworthy clients. Partial guarantees might encourage banks to make lines of credit more readily available to savings collectors and
NGOs engaged in microfinance. Technical assistance to (and prudential regulation of) semi-formal intermediaries would help give formal institutions greater confidence in them. Banks could provide a deposit instrument adapted for savings and credit societies.

Improving contract enforcement through legal system reform is another important fundamental long-term institutional measure, especially to encourage formal financial institutions to help dynamic SSEs fill the 'missing middle.' In many countries, this may require introducing special commercial laws and courts. Banks may even be willing to bear some of the cost. Measures to facilitate taking collateral in forms other than landed property—as informal lenders do—are needed not only because land title remains uncertain or not transferable in many countries but because few small borrowers possess land. For example, laws and courts that facilitate seizure of equipment and stock in case of default would encourage leasing and working capital loans, especially to smaller businesses.

Difficulties in obtaining reliable information and in managing risks cause fragmentation by raising the costs to formal institutions of entering household and SSE market segments and providing local monopolies to informal agents who have developed individualized information and social networks. Measures to improve information flows concerning borrowers include credit bureaus, registries for recording secured debt, and audits available to small businesses at reasonable cost. An innovation in Swaziland is 'smart [debit] cards' that enable small business borrowers to purchase inputs and banks to monitor their accounts without costly repeated approvals and face-to-face contacts.

The study findings indicate that successful risk management depends more on lending methodologies that emphasize screening or pre-selection of certain categories of borrowers than on intensive monitoring. To expand financial services in financial market segments viewed as risky by banks, it is likely to be more effective to induce banks to link up with semi-formal or informal institutions that use appropriate methods than to expect banks to lend directly. For example, partial guarantee of a line of credit to an NGO or association of informal agents for on-lending in small amounts would make more sense than guaranteeing direct small loans by banks.

Effective micro-finance techniques have emerged from the experiences of a growing number of institutions worldwide that have achieved high levels of outreach and sustainability (Otero and Rhyne 1994, Christen, Rhyne and Vogel 1994). They manage risks through methods similar to those of informal agents, such as small, increasing repeat loans and borrower groups. While still in their infancy in the countries studied (Reed and Reiling 1994), a number of these institutions in other countries have made the transition from projects or semi-formal NGOs to full financial intermediaries. Development of such institutions can help fill financial gaps and provide financial services to the wider population. Direct support should be performance-based and oriented toward building institutional capabilities and helping institutions through the transition to efficient methods and optimal scale. Such support may include institutional development grants, fixed assets, time-limited coverage of operating or expansion costs, and lines of credit or capitalization grants for institutions with high levels of performance in terms of loan.
recovery, self-sufficiency, outreach, and sound management (Committee of Donor
Agencies 1995). Those institutions that satisfy market demand and successfully manage
the risks involved would continue to qualify for assistance and expand; those that do not
should be phased out from assistance.

The study findings point to a number of ways in which the information, risk
management, and contract enforcement barriers to small financial transactions are being
addressed through innovative methodologies, mainly in informal and semi-formal
institutions. Including these institutions in financial development strategies offers
important potential for accelerating the process of financial deepening and providing
widespread access to financial services that is made possible—but experience shows is by
no means assured—by the liberalization of financially repressive policies.
REFERENCES


RECENT WORLD BANK TECHNICAL PAPERS (continued)

No. 307 Narayan, Toward Participatory Research
No. 308 Adamson and others, Energy Use, Air Pollution, and Environmental Policy in Krakow: Can Economic Incentives Really Help?
No. 310 Elder and Cooley, editors, Sustainable Settlement and Development of the Onchocerciasis Control Programme Area: Proceedings of a Ministerial Meeting
No. 311 Webster, Riopelle and Chidzero, World Bank Lending for Small Enterprises 1989-1993
No. 312 Benoit, Project Finance at the World Bank: An Overview of Policies and Instruments
No. 313 Kapur, Airport Infrastructure: The Emerging Role of the Private Sector
No. 315 Schwartz and Kimberley, Information Technology and National Trade Facilitation: Making the Most of Global Trade
No. 316 Valdés and Kimberley, Information Technology and National Trade Facilitation: Guide to Best Practice
No. 318 Srivastava, Lambert and Vietmeyer, Medicinal Plants: An Expanding Role in Development
No. 319 Srivastava, Smith, and Forno, Biodiversity and Agriculture. Implications for Conservation and Development
No. 320 Peters, The Ecology and Management of Non-Timber Forest Resources
No. 321 Pannier, editor, Corporate Governance of Public Enterprises in Transitional Economies
No. 322 Cabraal, Cosgrove-Davies, and Schaeffer, Best Practices for Photovoltaic Household Electrification Programs
No. 323 Bacon, Besant-Jones, and Heidarian, Estimating Construction Costs and Schedules. Experience with Power Generation Projects in Developing Countries
No. 324 Colletta, Balachander, Liang, The Condition of Young Children in Sub-Saharan Africa: The Convergence of Health, Nutrition, and Early Education
No. 325 Valdés and Schaeffer in collaboration with Martin, Surveillance of Agricultural Price and Trade Policies: A Handbook for Paraguay
No. 326 De Geyndt, Social Development and Absolute Poverty in Asia and Latin America
No. 327 Mohan, editor, Bibliography of Publications. Technical Department, Africa Region, July 1987 to April 1996
No. 328 Mohan, Djanajkov, and Anderson, Restructuring Large Industrial Firms in Central and Eastern Europe: An Empirical Analysis
No. 329 Jha, Ranson, and Bobadilla, Measuring the Burden of Disease and the Cost-Effectiveness of Health Interventions. A Case Study in Guinea
No. 330 Mosse and Sontheimer, Performance Monitoring Indicators Handbook
No. 331 Birman and Le Moigne, Fostering Riparian Cooperation in International River Basins: The World Bank at Its Best in Development Diplomacy
No. 332 Francis, with Akinwumi, Ngwu, Nkom, Odhi, Olomajeye, Okumadewa and Shehu, State, Community, and Local Development in Nigeria
No. 333 Young, Measuring Economic Benefits for Water Investments and Policies
No. 335 Rutkowski, Changes in the Wage Structure during Economic Transition in Central and Eastern Europe
No. 336 Goldstein, Preker, Adeyin, and Chellaraj, Trends in Health Status, Services, and Finance: The Transition in Central and Eastern Europe, Volume I
No. 337 Kottelat and Whitten, Freshwater Biodiversity in Asia, with Special Reference to Fish
No. 338 Klugman and Schieber with Heleniak and Hon, A Survey of Health Reform in Central Asia
No. 339 Stock and de Veen, Expanding Labor-based Methods for Road Works in Africa
No. 340 Buscaglia and Dakolias, Judicial Reform in Latin American Courts: The Experience in Argentina and Ecuador
No. 343 Lambert, Srivastava, Vietmeyer, Medicinal Plants: Rescuing a Global Heritage