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Financial Market Fragmentation and Reforms in Ghana, Malawi, Nigeria, and Tanzania

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This article reports the findings from surveys of formal and informal institutions and their clients in Ghana, Malawi, Nigeria, and Tanzania. It investigates the hypothesis 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. The four countries have substantially fragmented financial markets, with weak linkages between formal and informal segments and interest rate differentials that cannot be adequately explained by differences in costs and risks. Nevertheless, the relatively low transaction costs and loan losses of informal institutions indicate that they provide a reasonably efficient solution to information, transaction cost, and enforcement problems that exclude their clients from access to formal banking services. 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, and to improve the integration of informal and formal financial markets.

Expecting to hasten financial deepening and reduce fragmentation of financial markets, governments in many Sub-Saharan African countries initiated financial policy reforms in the 1980s. This article examines the experience in four countries and raises the issue of whether policy reform programs need to be accompanied by measures to address the institutional and structural problems of financial systems in Africa. We use survey findings to compare the behavior of informal and formal financial markets in handling risks and transaction costs. We evaluate indicators of financial deepening and lending to the private sector.

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The countries studied—Ghana, Malawi, Nigeria, and Tanzania—have similar types of financial systems but different degrees of financial development and liberalization, permitting cross-country comparisons.

The analysis distinguishes between efficient *specialization* for market niches by different segments of informal and formal finance and *fragmentation* with impediments to efficient intermediation. Under efficient specialization for differentiated risk and cost characteristics, interest rate differentials reflect differences in cost of funds, transaction costs, and risk. In fragmented markets, wide differences in risk-adjusted returns occur because funds and information do not flow between segments, and clients have limited access to different financial instruments, resulting in low substitutability. Where poor information and contract enforcement make it too costly for formal financial institutions to serve small businesses and households, informal sector techniques may have an important role to play in serving these financial market segments.

Section I provides some background on initial conditions and policy reforms. Section II presents the analytical framework used to examine market responses and performance. Section III presents the evidence on segmentation, and section IV analyzes the responses of different segments to policy reforms. Section V concludes with policy implications.

I. Background

The review in "Adjustment in Africa" (World Bank 1994) acknowledges the limited progress in financial sector reform in Africa and calls for some rethinking of strategy. Financial liberalization may need to be accompanied by measures to address institutional weaknesses and structural obstacles that inhibit financial market efficiency and integration.

In most African countries, the indigenous private sector consists largely of households and small-scale enterprises that operate outside the formal financial system. Analysts refer to the informal sector by many terms, such as unorganized, noninstitutional, 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). The semiformal sector has characteristics of both the formal and informal sectors—for example, legally registered institutions that are not directly regulated by the financial authorities.

Informal savings activities in Africa are widespread but generally self-contained and isolated from those of formal institutions (Adams and Fitchett 1992 and Bouman 1995). There is evidence of demand for external finance by enterprises that want to expand beyond the limits of self-finance but that have historically lacked access to bank credit (Aryeetey and others 1994; Levy 1992; Liedholm 1991; Parker, Riopelle, and Steel 1995; and Steel and Webster 1992). Better integration among different segments of the financial system—formal, semiformal, and informal—could facilitate economic development by mobiliz-

ing household resources more effectively and improving the flow of financial resources to enterprises with high potential (Seibel and Marx 1987).

We selected Ghana, Malawi, Nigeria, and Tanzania for this study on the basis of their reasonably comparable financial systems, financially repressive policies prior to reform in the late 1980s, well-documented financial systems, and experienced local researchers. Financial policies pursued in the four sample countries in the prereform 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 world (Johnston and Brekk 1991; Montiel 1996).

Financial repression discouraged investment in information capital. Savings mobilization was not actively pursued. Financial systems lacked active liquidity and liability management and incentives to increase efficiency, resulting in high costs of financial intermediation. Although the nature of particular measures varied by country, in general the allocation of investible funds shifted from the market to the government. The degree of government control over banking institutions was higher in socialist-oriented Tanzania and Ghana than in Malawi and Nigeria, which encouraged indigenous private agents following independence. Governments often used banking institutions as a source of implicit taxation, for example, by imposing high reserve requirements in the range of 20–25 percent of assets (more than 80 percent in Ghana in the early 1980s) and by financing operating losses of parastatals (Collier and Gunning 1991). In the period before adjustment, the share of government and public enterprises in total domestic credit was 86 and 95 percent in Ghana and Tanzania, respectively, and well over 50 percent in Malawi and Nigeria.

Governments implemented financial sector reforms to address these conditions through liberalization and balance-sheet restructuring. The reforms decontrolled interest rates and credit allocation and included efforts to strengthen regulatory and supervisory frameworks. Although 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. Policy sequences and the pace of reforms also differed across countries. All of the countries initiated policy reforms during the period 1985–87 (although implementation in Tanzania was very slow before 1991).

Analysts frequently mention the partial nature of reforms and inadequate institution building as explanations for the disappointing outcomes of financial liberalization in Sub-Saharan Africa (World Bank 1994). The experience of the Southern Cone countries in South America shows that important conditions for successful liberalization include macroeconomic stability, prudential supervision, and an adequate regulatory framework. The financial reform programs introduced in Ghana and Malawi addressed these conditions, at least to some extent. Ghana reduced fiscal imbalances before decontrolling the interest rate and credit allocation over a two-year period and restructured banks and their balance sheets.

The country paid early attention to strengthening the regulatory and supervisory environment and to developing money and capital markets. In Malawi, too, major fiscal and public enterprise reforms prior to financial liberalization reduced the cost of bank restructuring. The reforms gradually decontrolled interest rates and implemented institution-building measures. Neither country experienced major financial crisis.

In Tanzania problems arose from delays in restructuring parastatals, which were the banks' main borrowers. Banks' net worth deteriorated significantly as they continued to extend credit to poorly performing parastatals. Nonperforming loans accumulated, greatly increasing the cost of balance-sheet restructuring. Thus, weaknesses on the institutional side impeded progress in policy reforms. In Nigeria financial sector reforms were thrown into crisis by the sequencing of reform measures and the lack of the necessary prerequisites for liberalization. In particular, 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, raising questions of policy credibility.

Our fieldwork shows that, in comparison with the disappointing response of formal institutions to reform measures, informal financial agents responded dynamically in the adjustment period in all four countries. In particular, we observe signs of innovation in the semiformal financial sector. However, with weak linkages between segments of the financial market, these new developments have as yet had little measurable impact on market fragmentation, resource mobilization, and financial intermediation.

II. Analytical Framework

Two leading theoretical paradigms in contemporary financial economics provide analytical frameworks for examining the impact of policy reforms on financial market fragmentation. These paradigms complement each other but focus on different policy-based or structural and institutional explanations.

A Policy-Based Explanation of Financial Market Fragmentation

The financial repression hypothesis (McKinnon 1973; Shaw 1973; and Fry 1982, 1988) attributes underdeveloped and inefficient financial systems to *government policy* failures, which result from excessive intervention. The hypothesis sees repressive policies as the prime cause of fragmentation (Roe 1991). Ceilings on deposit and loan rates tend to raise the demand for and depress the supply of funds. 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 and thereby eliminate the need for informal finance. 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 for previously marginalized savers and borrowers.

Structural and Institutional Explanations of Financial Market Fragmentation

Other authors have concentrated on structural and institutional features of the financial markets of developing countries to explain fragmentation. Hoff and Stiglitz (1990) advance an explanation 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* result from *adverse selection* and *moral hazard*, which undermine the operation of financial markets. 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 borrow to pay high interest on existing loans to avoid bankruptcy or borrow without the intention or the capacity to pay back loans. Thus the level of interest rates affects the risk composition of financial portfolios (Stiglitz and Weiss 1981 and Stiglitz 1989). Concerned about greater risk, lenders may resort to nonprice rationing rather than raise interest rates when faced with excess demand for credit. As a result, credit rationing may characterize market equilibrium even in the absence of interest rate ceilings and direct allocation. Liberalized markets do not necessarily ensure Pareto-efficient allocation (Stiglitz 1994).

Problems arising from imperfect information are likely to be most pronounced in low-income countries, where information flows are limited by poor communications, and gathering information is often costly. 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 on localized, personal information that gives them local monopoly power but constrains their ability to scale up.

Segmentation may also result from weaknesses 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 will accept. The 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 seg-

ments that formal banks avoid for these institutional reasons may nevertheless be served by informal agents who use personal relationships, social sanctions, and collateral substitutes such as reputation and group responsibility to ensure payment.

Synthesizing Alternative Explanations of Financial Market Fragmentation

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

Roemer and Jones (1991) also make a useful distinction 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. Roemer and Jones 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 implies that fragmentation may persist despite liberalization.

Structural and institutional barriers across segments provide the opportunity to exploit monopoly power, thus perpetuating fragmentation. A pronounced feature of financial markets in Sub-Saharan Africa 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 integration of segments may be necessary (Seibel 1989). As financial sector reforms address policy-induced bottlenecks, the extent to which structural and institutional deficiencies constrain efficient specialization becomes more observable.

Hypotheses about the Effects of Liberalization on Access to Formal Finance

Under the financial repression hypothesis, liberalization of restrictive policies on interest rates and entry leads to greater access to formal finance for previously marginalized borrowers, lower spreads between borrowing and lending rates, increased financial flows between segments of the financial market, and a diminished role for informal finance. Lack of a well-defined time period in which the results should occur limits our ability to test this hypothesis. However, we anticipate that some perverse effects will occur initially, with the removal of interest rate ceilings and the restructuring of bank portfolios. We conducted our study more than three years after the initiation of reforms in each of the countries, a period sufficient to observe the initial

effects on informal finance, although reform of the formal financial sector was not necessarily complete.

If informal finance represents an efficiency-improving solution to structural problems of imperfect information and contract enforcement, we would expect to observe specialized techniques designed to minimize transaction costs and risks in dealing with narrow market segments. If structural and institutional constraints are important, reforms in the formal financial sector would have little impact 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 for Constructing the Sample

We collected data on 283 informal financial institutions and 174 bank branches in the four countries during 1992 and 1993 (see tables 1 and 2). Altogether the sample has 160 observations for Ghana, 104 for Malawi, 104 for Nigeria, and 89 for Tanzania. We attempted to survey bank branches representing all major commercial and development banks in each country and a representative sample

Table 1. *Survey Sample of Informal Nonbank Financial Institutions, 1992–93*
(number of observations)

Country	*Savings collectors*	*Money lenders*	*Traders, landlords*	*Rotating savings and credit associations (ROSCAs)*	*Savings and credit cooperatives (SCCs)*	*Credit unions*	*Other*[a]	*Total*
Ghana	28	12	—	18	12	18	2	90
Malawi	—	23	29	9	9	—	—	70
Nigeria	15	20	—	12	10	4	3	64
Tanzania	—	—	30	10	19	—	—	59
Total	43	55	59	49	50	22	5	283
Percent	15.2	20.8	20.8	17.3	17.7	7.8	1.8	100.0

— Not available.
a. Savings and loan companies, finance houses.
Source: Authors' calculations based on survey data.

Table 2. *Survey Sample of Formal Banking Institutions, 1992–93*
(number of observations, including branches)

Country	*Commercial and merchant banks*	*Development banks*	*Other*[a]	*Total*	*Total in rural areas*
Ghana	38	14	18	70	35
Malawi	14	3	17	34	15
Nigeria	34	0	6	40	8
Tanzania	6	15	9	30	5
Total	92	32	50	174	63
Percent	52.9	18.4	28.7	100.0	36.2

a. Rural banks (Ghana), community and people's banks (Nigeria), building society and union of savings and credit cooperatives (Malawi), postal bank (Tanzania).
Source: Authors' calculations based on survey data.

of specialized banking institutions (such as rural banks, community banks, building societies, and postal banks). For informal financial institutions, no systematic enumeration was available that could serve as a sampling frame. Furthermore, differences in the nature of informal institutions are found across countries. Hence we selected representative respondents from three broad categories of informal institutions (see section III), based on interviews with borrowers and prior knowledge by the local research teams. 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. We used the surveys to obtain retrospective information on changes over the preceding two years. 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. 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. The results are presented in more detail in Nissanke and Aryeetey (forthcoming), Aryeetey and others (1997), Aryeetey (1994 and 1996), Bagachwa (1995 and 1996), Chipeta and Mkandawire (1996a and 1996b), and Soyibo (1996a and 1996b).

We gathered data on formal financial flows and indicators from published sources and central bank authorities. We compared data for 1987–92 with data for 1981–86 to analyze changes that occurred after reforms were under way.

III. Financial Market Segmentation

This section summarizes the specialized techniques of informal financial institutions and compares them with those of banks. The evidence indicates the extent to which informal markets are more efficient than formal financial markets.

Types of Informal Financial Institutions

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 financial transactions in the formal sector, transactions in the informal sector rarely involve legal documentation. We identify three basic approaches to risk and contract enforcement problems. One category specializes in either the credit or the savings side of the market. Another category bases the financial transaction on a personal or business rela-

tionship. A third category provides full financial intermediation between savers and borrowers. We draw roughly a third of the sample from each of these three categories.

SPECIALISTS IN ONE SIDE OF THE MARKET. Moneylending covers a wide range of credit arrangements that differ across countries, with interest rates ranging from 0 to as much as 100 percent a month. (In general, the most common source of informal finance consists of relatives and friends; this type was not covered in the survey because of its noncommercial character.) All the informal moneylenders surveyed base their lending decisions on firsthand knowledge of the borrower. In our sample, there are few professional moneylenders. More commonly, part-time moneylenders use surplus funds from other sources such as a commercial business. Professional and part-time moneylenders account for 55 (of the total 457) observations in the combined survey sample.

Individuals who operate primarily on the savings side are found only in West Africa (43 observations in Ghana and Nigeria). 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. These mobile bankers 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 (Miracle, Miracle, and Cohen 1980 and Aryeetey and Steel 1995). Savings collectors place most of their deposits in banks for safekeeping, but they sometimes extend advances to their best clients before the end of the month.

RELATIONSHIP-BASED LENDERS. Rotating savings and credit associations are pervasive in all the countries studied. ROSCAs are known as (among other names) *susu* in Ghana, *esusu* in Nigeria, *upatu* or *mchezo* in Tanzania, and *chilemba* or *chiperegani* in Malawi. ROSCAs are membership groups in which all members pay in set amounts at regular intervals to a common pool, which goes to each member in turn (usually randomly, but some variations allow bidding). Intermediation occurs between members whose turn comes earlier and later within a small, closed group over a fixed period of time. Mutual trust offsets the risk that early recipients will drop out. In another type of savings and credit association, members 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. Rotating savings and credit associations represent 49 observations in the four countries in our sample.

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 have long-term business relationships with their clients account for 59 observations in our sample.

FINANCIAL INTERMEDIARIES. Savings and credit cooperatives (SCCs), or societies, raise savings from and make loans to members. Although they are membership organizations, sometimes raising money from shares as well as voluntary deposits, they are relatively large and open to new members, unlike ROSCAs. Credit unions are registered as such and represent a more formal form of SCC based on share capital. SCCs and credit unions (with 50 and 22 observations, respectively, in the combined sample) use repeat transactions to screen borrowers. Other semiformal institutions (5 observations), such as finance houses, have emerged to both mobilize and lend funds to the general public (see section IV).

Management of Information and Risk

The banks surveyed in the sample countries view 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. Through heavy emphasis on stringent collateral requirements for loans and high minimum deposit requirements, banks effectively screen out the vast majority of small clients. We rarely observe foreclosure on collateral or legal actions in our survey, reflecting weak and uncertain legal systems.

Informal lenders draw heavily on information obtained through personal, social, and business relationships in order to preselect clients. ROSCAs, SCCs, and credit unions operate with group membership selection criteria. Traders and landlords lend only to their customers and tenants. Most informal lenders do not use interest rates to discriminate among clients. Through prescreening, all of the borrowers of each lender fall into a similar risk category.

Informal lenders generally require security but are much more flexible than banks in accepting personal guarantees, arrangements with employers, and movable property. About 60 percent of moneylenders in Nigeria, 63 percent in Tanzania, and 83 percent in Ghana require such security, as do 76 percent of credit unions in Ghana (but smaller SCCs and ROSCAs generally do not). In interlinked transactions, the crops pledged, the equipment provided, or the land involved serve as collateral. Informal enforcement is easier than going through the legal system. For example, a landlord-lender could make productive use of pledged farmland, whereas a bank would face a long, expensive legal process to seize it. Personal relationships and social pressure, either within membership groups or through family members, are often instrumental in ensuring repayment without aggressive enforcement measures.

Our survey finds that linking loans with real sector transactions is a common informal technique in all countries. 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 lower implicit rate (6 percent a month) for linked loans than for unlinked cash loans (9 percent) from trader-lenders in Tanzania and loan sizes that are five times the size of unlinked loans show that interlinked transactions reduce uncertainty.

Evidence of Financial Market Fragmentation

Weak linkages between segments of the financial market and differences in returns that cannot be explained by costs and risks indicate fragmentation. To study the costs and risks, we gathered data on interest rates, default risk, and transaction costs, although we find it difficult to make precise comparisons for loan instruments of widely different terms and conditions.

Financial flows from formal to informal markets are negligible. Informal financial agents generally have a limited capital base and little access to borrowed funds. Even those moneylenders who can access bank credit through their other business activities rarely do so for the purpose of on-lending. The main sources of the expanding supply of loanable funds by informal agents are mobilized savings and reinvested profits (including from other activities).

By contrast, informal deposit mobilizers (except for ROSCAs) frequently maintain bank accounts, especially in urban areas. In Ghana 89 percent of informal operators report having a bank account, in Nigeria 82 percent, and in Tanzania 97 percent in urban areas and 67 percent in rural areas. We find no direct linkages between informal agents, although some clients use savings collectors to accumulate funds for contributions to their ROSCA or credit union. Informal clients generally have neither a savings nor a credit relationship with formal banks, and few can obtain credit from more than one source.

Interest rates vary widely across informal institutions, as well as between formal and informal markets. Moneylenders' rates are generally at least 50 percent above formal rates, with average monthly interest ranging from under 10 percent in Tanzania to 48 percent in Malawi, reaching as high as 100 percent a month in individual cases. The average monthly interest rate of SCCs in Malawi is also relatively high at 13 percent, well above rates in the formal sector, whereas the average of 2.6 percent a month in Tanzania is comparable to the 31 percent a year charged by the state-owned commercial bank.

Delinquency and default rates of informal lenders are generally low relative to banks in the sample countries. In Ghana 70 to 80 percent of informal lenders have no delinquent borrowers compared with 80 to 86 percent in Nigeria. In all cases, lenders are confident that delinquent borrowers will repay within three months of the loan maturing. Eventual default rates in Tanzania are as low as 0.1 percent for SCCs, 2.5 percent for ROSCAs, and 4 percent for traders and landlords. In contrast, commercial banks report very high rates of nonperforming loans, averaging from 45 percent in Nigeria to more than 80 percent in Tanzania (in part a problem of state banks and parastatal borrowers), with only limited recovery through portfolio restructuring exercises.

Loan administration costs (screening, monitoring, and contract enforcement) are generally lower as a percentage of loan amounts for informal lenders than for banks. Most of the informal lenders' costs are in prescreening the client's ability to repay, not the particular use of the funds, whereas banks devote considerable resources to project evaluation. The value of the time that moneylend-

ers allocate to administering loans is equivalent to only 0.6 to 3.2 percent of loan amounts across the four countries, compared with 1.7 to 12.9 percent for bank loans to small-scale enterprises (as high as 18.9 percent for large-scale enterprises). Credit unions fall within the same range as moneylenders, while their less formal counterparts, SCCs, are consistently lower at 1 percent or less. The part-time nature of much informal lending and the lack of overhead help explain the relatively low costs.

The cost of lending also depends on the cost of funds. Banks' cost of funds in 1992, as indicated by deposit rates, were 16 percent in Ghana, 17 percent in Malawi, 18 percent in Nigeria, and 22 percent in Tanzania. (The inflation rate, measured by the gross domestic product (GDP) deflator, in 1992 was 13 percent in Ghana, 18 percent in Malawi, 65 percent in Nigeria, and 19 percent in Tanzania.) Most of the informal financial units surveyed mobilize their own funds, usually at very low cost; they have no access to bank loans for on-lending. Savings collectors have a *negative* cost of funds, because they receive payment for taking deposits. ROSCA members evidently have a low opportunity cost of funds, because they persist despite the absence of interest payments. The opportunity cost of funds for moneylenders who are also traders is low because they generally lend out temporarily idle funds.

The evidence indicates that financial markets in the sample countries are highly fragmented. Formal and informal lenders are polarized at extreme ends of the market, with relatively little overlap of clientele. Each informal and formal institution selects a narrow range of clients and products. Although some informal agents link households and small businesses to the formal financial system through their deposit mobilization activities, this is a one-way link with virtually no linkage on the credit side.

Furthermore, risk-adjusted returns do not appear comparable across segments. Informal interest rates are generally much higher than formal rates, yet informal lenders have both lower transaction costs and lower default rates. Among informal lenders, the variation in rates is much wider than the variation in transaction costs and default rates. Informal lenders appear better able to enforce collateral than banks and to have a relatively low opportunity cost of funds. Hence the relatively high rates charged by informal moneylenders are likely to represent substantial monopoly power vis-à-vis borrowers who lack access either to formal credit or to membership-based informal finance.

Nevertheless, the relatively low transaction costs and loan losses of informal agents in serving clients who lack access to the formal banking system indicate that they provide a reasonably low-cost solution to the information and enforcement problems that characterize African economies.

IV. Financial Sector Responses Following Reforms

This section investigates the financial repression hypothesis. It looks at how different segments of the financial market responded to the introduction of lib-

eralization measures in terms of deposit mobilization, financial deepening, lending, and interest rate spreads. Reformers expected that bank depositors would switch to interest-bearing, longer-term deposits and that 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.

It should be stressed that financial sector reforms are ongoing, encompassing wide-ranging measures rather than just liberalization of interest rates and credit allocation. Because the breadth and depth of financial reforms vary 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.

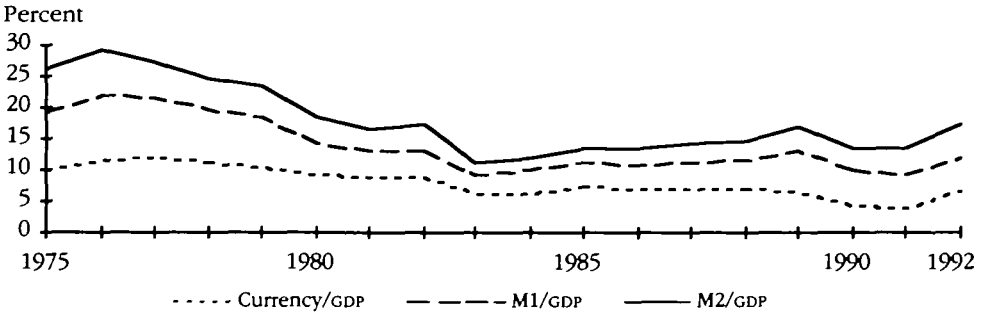
Financial Deepening and Deposit Mobilization

The countries in our sample made little progress in savings mobilization, with fluctuating growth in the number of depositors and the size of deposits following the introduction of reforms. Figures 1–4 show little net change in the mobilization of deposits by banking institutions, as measured by the ratios of currency in circulation (M1 and M2) to GDP. The M2-to-GDP ratios of the sample countries—31 percent for Tanzania over 1987–92, 15 to 21 percent for the others—lie below those for countries of comparable income per capita from other regions, such as Honduras (31 percent), Bangladesh (33 percent), Pakistan (43 percent), and India (48 percent).

Ghana's financial depth was the lowest among the countries studied, despite some improvements after the mid-1980s, and remained far below the levels attained in the 1970s. Though Malawi achieved 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-to-GDP ratio has remained under 5 percent, although nontransaction demand for money (the difference between M2 and M1) was higher than in the other three countries, accounting for 10–14 percent of GDP.

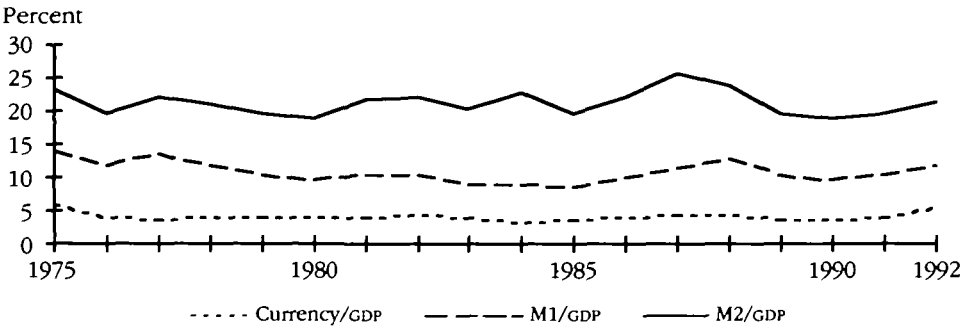
Nigeria's indicators of financial deepening were affected by the difficulties experienced after liberalization attempts. Figure 3 shows that both M2-to-GDP and (M2–M1)-to-GDP ratios declined sharply in the late 1980s, partly because the government abruptly withdrew public sector deposits from the banking system. Although these ratios have since recovered, Nigeria's process of financial deepening appears to have stalled in the 1990s. Tanzania had a higher M2-to-GDP ratio than the other study countries in the late 1970s, but the banking system lost ground in savings mobilization in the initial years of economic reform (1984–88). Recently currency accounted for more than a third of M2, and the nontransaction demand for money had declined noticeably.

Figure 1. *Indicators of Financial Deepening in Ghana, 1975–92*



Note. M1 measures money supply as demand deposits plus currency in circulation, M2 is M1 plus time and savings deposits.
Source IMF (various years); Bank of Ghana (various years).

Figure 2. *Indicators of Financial Deepening in Malawi, 1975–92*

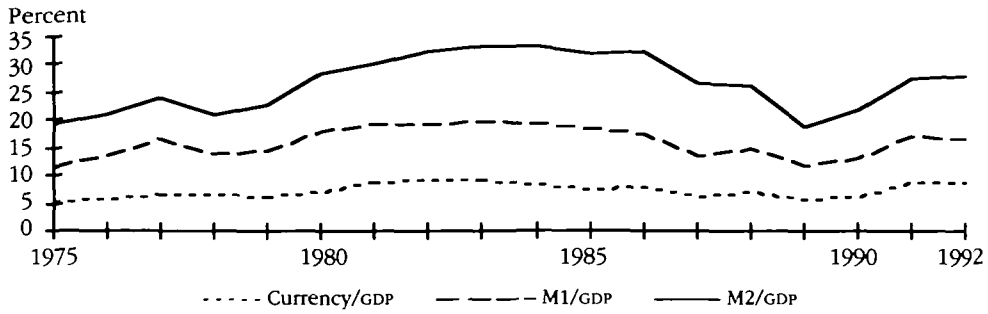


Note: M1 measures money supply as demand deposits plus currency in circulation; M2 is M1 plus time and savings deposits
Source: IMF (various years); Reserve Bank of Malawi (various years)

Liquid short-term instruments continued to dominate the liabilities of banking institutions during the reform period, although the general trend was toward a smaller share of demand deposits (table 3). In Nigeria the share of time deposits actually fell 15 percentage points between 1980 and 1992. Only in Tanzania was demand for time deposits clearly both strong and rising. In sum, the deposit base of banking institutions remained volatile, with only limited change in the structure of liability.

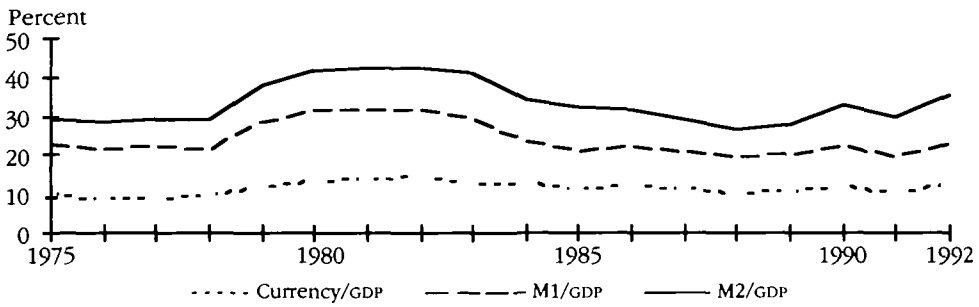
RESOURCE MOBILIZATION BY INFORMAL FINANCIAL INSTITUTIONS. In contrast to the disappointing performance of the formal financial sector following reforms, the survey results show that informal financial institutions in all four countries responded dynamically to increased demand for their services in the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

Figure 3. *Indicators of Financial Deepening in Nigeria, 1975–92*



Note· M1 measures money supply as demand deposits plus currency in circulation; M2 is M1 plus time and savings deposits.
Source· IMF (various years), Central Bank of Nigeria (various years)

Figure 4. *Indicators of Financial Deepening in Tanzania, 1975–92*



Note. M1 measures money supply as demand deposits plus currency in circulation; M2 is M1 plus time and savings deposits.
Source. IMF (various years); Bank of Tanzania (various years).

Survey results indicate that deposits increased in informal sector institutions. Determining national trends in aggregate deposits is difficult because of seasonal and annual fluctuations in the amounts reported and the absence of nationwide data. Indications are that the number of informal institutions was increasing in all countries, thus multiplying the increases per institution reported from the survey data. In Tanzania the total volume of deposits rose 67 percent in the SCCs surveyed and 113 percent in ROSCAs from 1990 to 1992, due to increases in both the number of members and the average size of deposits. In Nigeria deposits rose 100 percent in credit unions, 56 percent in SCCs, and 77 percent in ROSCAs over the same period. In Malawi deposits grew 44 percent in community funds from 1989 to 1991 and 45 percent in ROSCAs (both faster in urban areas), mainly as a result of deposits from additional members. The average number of clients per savings 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 51 percent in Nigeria and 64 percent in Ghana.

Table 3. *Changes in Composition of Bank Deposit Liabilities, 1980 and 1992*
(percentage of total deposits)

	Demand deposits		*Savings deposits*		*Time deposits*	
Country	*1980*	*1992*	*1980*	*1992*	*1980*	*1992*
Ghana	71[a]	57[b]	28[a]	34[b]	1[a]	8[b]
Malawi	40	38	—	—	60[c]	62[c]
Nigeria	48	44	15	34	37	22
Tanzania	67	45	10	17	23	30

— Not available.
a. 1983.
b. 1991.
c. Figures are for both time and savings deposits.
Source: Aryeetey 1994; Bagachwa 1996; Soyibo 1996a; the figures for Malawi are calculated from Reserve Bank of Malawi, various years.

TRENDS IN LENDING. Reformers tried to restructure bank loan portfolios to expunge nonperforming loans, largely to public enterprises, and to enable banks to resume lending to private enterprises. Although the share of lending by commercial banks to the private sector generally increased in Ghana and Tanzania, lending to the public sector remained high, reflecting past development strategy (table 4). The share of the private sector in bank lending was higher in Malawi and Nigeria (compared with Ghana and Tanzania), but contracted 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 and Nigeria and remained relatively low in Ghana at 4 percent and in Tanzania at 2 percent. Indeed, in all four countries, the ratio of private sector lending to GDP was remarkably lower (2 to 11 percent) than in many countries with comparable income per capita, for example, 50 percent in Indonesia and 20 percent in Kenya (International Monetary Fund 1995).

There was also little change in banks' lending profile within the private sector portfolio. Banks continued to concentrate on their traditional large, established customers and to avoid small-scale enterprises and small farmers. In Ghana large enterprises (30 or more workers) took as much as 74 and 50 percent of loans extended to the private sector by commercial banks and development banks,

Table 4. *Credit Allocation between the Private and Public Sectors, 1981–93*
(percent)

	Share of credit to the public sector in total credit		*Private sector lending in total commercial bank lending*			*Ratio of private sector credit to GDP*	
Country	*1981–86*	*1987–92*	*1986*	*1990*	*1993*	*1981–86*	*1987–92*
Ghana	86.3	74.5	13.6	27.6	35.8	2.4	4.1
Malawi	63.3	53.6	39.4	52.5	40.4	14.6	9.1
Nigeria	55.3	50.3[a]	47.2	63.5	44.9	17.4	11.3
Tanzania	94.8	61.6[b]	7.2	14.6	27.1	2.3	2.2

a. 1987–91.
b. 1987–88.
Source: Authors' calculations based on various annual reports from relevant central banks.

respectively, although they represented less than 10 percent of firms and employment. In Malawi the small enterprise sector (fewer than 30 workers) received only 15 percent of total loan volumes in 1992, while large enterprises received 63 percent of total loans disbursed. Only in Nigeria was there little disparity in the number of loans to the small and large enterprise sectors, although large enterprises continued to receive a greater share of total loans disbursed.

In sum, despite liberalization and attempts to introduce greater competition, formal finance did not become more accessible to a broad section of the real economy. Sectoral credit distribution remained dominated by short-term credit for trade, as in Ghana and Nigeria, or by financing for the processing and marketing of agricultural exports, as in Malawi and Tanzania. Usually only large manufacturing firms received credit from banks. Other characteristics of formal sector loans, such as maturities and real average loan sizes, hardly changed after reforms were initiated.

INFORMAL CREDIT DEMAND AND SUPPLY. Strong increases in the number of loan applications received and approved are observed for almost all informal lenders in the sample countries. The only notable exceptions are the relatively small credit unions in Nigeria and community funds and savings and credit cooperatives in Malawi. The activities of moneylenders increased sharply in all four countries; the number of loans rose 20 to 130 percent (60 to 73 percent for traders in Tanzania and Malawi). In many cases, loan approval rates rose along with the number of applications, implying an increase in the supply of as well as the demand for funds. Nevertheless, substantial excess demand was reported; for example, 42 percent of moneylenders and 40 percent of savings collectors in Ghana were unable to satisfy all the loans demanded by clients they considered creditworthy.

The survey results suggest that the growth in operations of informal agents was related more to 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 was growing. Liberalization of grain markets during the 1980s in particular fostered private traders who provided short-term financing for crops. In Ghana, increased financial market activity from liberalization of product markets and increased imports associated with structural adjustment expanded the savings mobilized by savings 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, because 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 remained persistently high during the reform years (table 5). In most cases, high spreads 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). The ratios were high relative to Indonesia (0.2), Bangladesh (0.3), and the Philippines (0.3). (See International Monetary Fund 1995.) This trend in spreads indicates low competition in financial markets and high cost of funds and transaction costs in bank lending. 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 spreads; however, banks voluntarily held reserve instruments well in excess of requirements, indicating that excess liquidity persisted despite high spreads. Thus, there is little evidence of improved efficiency of intermediation in the banking sector.

In some cases moneylenders' interest rates declined following financial sector reforms. The survey respondents did not associate these changes with prevailing interest rates or competition, but rather 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.

Portfolio Management

Reform measures had limited impact on banks' portfolio management at the time of the study. 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 base of information.

Lending remained constrained by external factors such as policy uncertainty, resulting in a low-lending trap despite latent excess demand for credit—particularly by small-scale enterprises with good opportunities but insufficient collateral. Furthermore, de facto crowding out of the private sector persisted in many countries because of the presence of high-yielding government securities. The

Table 5. *Interest Rates and Spreads in Sample Countries, 1987 and 1992*
(percent per year)

	Average fixed deposit rate		*Average lending rate*		*Spread*	
Country	*1987*	*1992*	*1987*	*1992*	*1987*	*1992*
Ghana	19.0[a]	15.0[a]	30.0[b]	29.0[b]	11.0	14.0
Malawi	14.3	16.5	19.5	22.5	5.3	6.0
Nigeria	13.1	18.0	—	31.2	—	13.2
Tanzania	14.5	16.0	29.0	31.0	14.5	15.0

— Not available.
a. Minimum on six-month deposit rate.
b. Maximum secured lending rate.
Source: Authors' calculations based on annual reports from relevant central banks.

portfolios of banking institutions remained dominated by a high incidence of nonperforming loans and excess liquidity.

Although many informal agents grew along with demand for their services, they had difficulty moving beyond their particular sphere of specialization. In general, informal lenders' liability base was 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 was limited by the incomes of members, the frequency of deposits, and the size of membership within which it could retain cohesion in its operation. There is little evidence of SCCs or informal agents borrowing externally to lend to their clientele. Their average size of loans remained far smaller than that of banks, while the maturities of their loans were shorter. The demand for medium-size, medium-term loans remained largely unsatisfied as both formal and informal segments of the financial system continued to serve their narrow market niches.

New Institutional Developments

Some signs indicate that emerging nonbank, semiformal institutions in West Africa increased competition (reflected in lower interest rates charged by moneylenders) and began to fill underserved market niches. In Ghana, for example, a nongovernmental organization (NGO) adopted the methods of savings collectors, and a new savings and loan company targeted market women and small businesses. Private finance houses in Nigeria provided services such as loans, hire-purchase, equipment leasing, factoring, project financing, and debt administration. They could not take regular deposits, but they could borrow amounts not below ₦100,000 from investors. Their willingness to lend short- and medium-term funds to clients who often could not satisfy the collateral requirements of conventional banks helped to improve the access to finance of SSCs in Nigeria (unlike the other countries studied).

Nevertheless, efforts to fill gaps in the financial system often had difficulties. Nigeria's finance houses were poorly regulated, and many collapsed. Attempts to establish unit banks in rural areas in both Ghana (rural banks) and Nigeria (community banks) 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 incurred substantial losses in trying to serve indigenous small-scale enterprises, in part because they also provided costly training, technical assistance, and advisory services.

Ghana's 1993 Non-Banking Financial Institutions Law helped foster new institutions for leasing, factoring, venture capital schemes, and discounting, as well as savings and loan companies. However, savings and loan companies tend to compete with savings collectors for the smallest depositors and borrowers, while leasing companies and venture capital schemes are mainly interested in the upper end of the market, where banks have always operated. Thus a gap remains in meeting demand from growing small enterprises and other underserved groups.

V. Conclusions and Policy Implications

Fragmentation of financial markets in Ghana, Malawi, Nigeria, and Tanzania has persisted more than seven years after the initiation of financial policy reforms. Fragmentation persists both because implementation of reform programs has been incomplete and because the reforms have not been accompanied by adequate complementary measures to 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 continue 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.

In the prevailing situation of imperfect information and uncertainty, informal financial agents in the four countries demonstrated a comparative advantage in serving the large share of the population with little access to formal intermediaries. Informal financial institutions used a variety of specialized methodologies to mitigate the problems caused by information asymmetries and to contain risks and transaction costs. In dealing with small clients, informal institutions used methods that enabled them to achieve relatively low transaction costs and default rates (compared with what banks reported for both large and small clients).

Formal financial deepening is 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 semiformal financial institutions to function and better integrate with the rest of the system.

Extensive *institution-building* measures clearly must be part of effective financial reform programs in Africa. Given the observed difficulties in improving the regulatory and supervisory framework and the soundness of bank portfolios, as well as in sustaining macroeconomic stability, 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, pp. 436–37). Reform of the *regulatory and supervisory system* should not only address formal institutions. It should also treat different tiers of the financial system according to their distinct characteristics, the likely benefits of regulation, and the ability of governments to regulate them effectively. Reform programs should balance encouraging innovative institutions, such as those emerging in some countries, with regulating institutions that are sufficiently large to come under the purview of formal financial authorities.

The study findings support the view that *incentives and support for linkages among segments of the financial market* 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. To expand financial market segments viewed as risky by banks, it is likely to be more effective to induce banks to link up with 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. 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 allow them to mobilize savings for deposit in commercial banks. Technical assistance to (and prudential regulation of) semiformal intermediaries would help give formal institutions greater confidence in lending to them. Banks could provide a deposit instrument adapted for savings and credit societies.

Improving *contract enforcement* through reform of the legal system is a fundamental long-term institutional measure that would encourage formal financial institutions to serve dynamic small-scale enterprises. This may require introducing special commercial laws and courts. Measures to facilitate taking collateral in forms other than landed property, such as laws and courts that facilitate the seizure of equipment and stock in case of default, would encourage leasing and working capital loans 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 small-scale enterprise market segments. These difficulties enable informal agents, who have developed individualized information and social networks, to form local monopolies. Measures to improve the flow of information about borrowers include establishing credit bureaus, creating registries for recording secured debt, and making audits available to small businesses at reasonable cost.

The study findings indicate that liberalization of financially repressive policies has limited impact on financial deepening without complementary measures to address problems of information, risk management, and contract enforcement. Innovative methodologies of informal and semiformal institutions, however, are overcoming these barriers to small financial transactions. Including these methodologies in financial development strategies offers important potential to improve financial intermediation and widen access to financial services in low-income countries.

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