

**TAX POLICY REFORM AND FINANCIAL INTERMEDIARIES
IN LESS DEVELOPED COUNTRIES**

PREPARED FOR

**OFFICE OF POLICY DEVELOPMENT AND PROGRAM REVIEW
BUREAU FOR PROGRAM AND POLICY COORDINATION
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT**

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EXECUTIVE SUMMARY

This study provides an overview for nonspecialists of the way in which tax systems and their reform may influence the development of financial intermediation in less developed countries. Though increasing attention has been paid to financial repression in the literature on economic development, few analysts appear to have focussed on financial repression as a problem of public finance or tax policy.

Part I discusses the role and functioning of financial intermediaries in a competitive, free market environment. Part II provides information on the primary ways in which financial intermediaries are taxed. Part III provides an analytical framework for evaluating the impact of these tax systems on intermediaries. Finally, Part IV presents policy recommendations aimed at improving the tax system.

Recent years have seen interest in development finance switch from credit to equity or equity-related services. Financial intermediation--one of the keys to growth in industrialized countries--often does not play the role it should in launching development activities in LDCs. Financial intermediation is the process by which banks and similar institutions pool savings, then seek out uses for the funds, typically through loans to businesses and farms. For some time it was generally believed that monetary and financial development was a consequence of real development, and this partly explains past choices. But an increasing number of economists now believe that development of the monetary and financial sector is a prerequisite for the development of real economic activity.

Financial intermediation could be carried out by quasi-governmental enterprises, and in many countries it is. However, a competitive system in which the private sector plays an important role provides three important advantages over purely government-directed intermediation:

- Competition tends to limit the "spreads" between interest paid by borrowers and that received by depositors. This serves as an incentive for increasing saving and provides more funds, more cheaply, to investors;
- Competition forces intermediaries to develop human capital--skills in evaluating and administering loans--and to gather information on potential borrowers more intensely and effectively;
- Competition enhances the efficiency with which intermediation is carried out, limiting bureaucratic administration and political and personal favoritism.

Although financial intermediation is crucial to economic development, many, if not most, LDCs actively inhibit the development of private intermediation, a phenomenon that has given rise to the term "financial repression." Repression is carried out through a cluster of policies: interest rate controls, exchange controls, taxation, credit allocation, and heavy reserve requirements, often combined with rapid inflation. In this cluster, explicit taxation is only one repressive policy. The other policies may be characterized as implicit taxation since they involve redirecting private resources to public ends.

By and large, explicit tax systems in LDCs are constructed much as in developed countries, and the structure is often inherited from the former colonial or regional power. The major difference is the degree to which government finance in LDCs depends on revenues from the various taxes. In the four countries examined here, the institutions of corporate and personal taxation are similar to those in the United States

and U.K., with variations not uncommon in other developed countries. These income tax systems, as in developed countries, often provide a complex web of incentives and disincentives--sometimes contradictory--the effect of which may be to discourage intermediation.^a

For example, in some countries, one explicit form of tax provision affecting intermediation lies in the discriminatory treatment given to particular kinds of payments or receipts, such as--in Botswana--in favor of interest from Post Office savings accounts or national development bonds. In Zambia, favorable treatment is only accorded to individuals and not to business depositors. In Jordan, all interest payments from intermediaries receive such favorable treatment.

Behind such explicit discrimination lies further implicit discrimination. One reason is the existence of informal--nontaxpaying--sectors. Any taxation of the formal intermediation sector will force activity into the informal, or "curb," market--moneylenders--not subject to regulation and taxation. Although these markets serve an important competitive function, individual moneylenders have limited scope for operations and limited resources and may therefore not be a sufficient replacement for larger and more formal, competitive institutions. In addition to favoritism to the curb market, many investments in nonfinancial sectors may receive favorable tax incentives, as they do in several countries in our sample. This favoritism discriminates implicitly against financial intermediaries.

^aIndirect taxes such as tariffs and sales taxes, though important, do not appear to have provisions that directly discriminate against depository institutions in our sample of countries.

To see this--and to reform it--requires evaluating the web of tax institutions in the context of public finance, not merely as aspects of "financial repression." The problem of tax reform and tax design is to develop a system of taxation that finances the desired public sector with the smallest sacrifice of economic growth. For these purposes the magnitude of public spending, and its consequences, are given. With required revenues a given, every incentive involves a revenue loss to be made up elsewhere, and thus is a disincentive for another activity.

The disincentive burden of the tax system can be measured by the total tax liability--at the margin--associated with a given decision such as whether to invest in a project. This is often called the marginal tax "wedge" and, when stated as a rate, as the "marginal effective tax rate" or "METR." The need for revenues entails an unavoidable tax burden, which may be approximated by the average tax rate on economic activity (measured, for example, by the proportion of government spending to GNP). Only the difference between this average and the tax burden on a specific activity is an indicator of discrimination. The average burden itself represents the burden of public spending. This last fact is often overlooked, causing an overestimate of the effects of taxes and of the likely gains from reform.

There are two important tax burdens on financial intermediation. The first is a cut in the returns from private saving and investment in general. From evidence on the magnitude of taxes in the spread between borrowing and lending rates, this burden could be sizable in many developing countries. Furthermore, this particular measure omits a number of the taxes that affect the saving and investment process.

The second burden is that on investment in the financial sector. A frequently encountered measure of this effect, the after-tax profitability of investment, may be a misleading indicator of the potential size of this burden because banking is often not competitive. In most developing countries the financial sector is oligopolistic: Entry is limited, profits tend to be high for existing banks, and there are "too many" banks and bank branches. Yet tax discrimination can only be effective, for good or ill, when investors and others are free to respond to the market signals to which discrimination gives rise.

The important question for tax reform is what impact the tax system would have on a potential investor in banking if entry to the sector were permitted. No investigators appear to have addressed this issue. To do so would require making a number of hypothetical calculations--described in this study--of the amount by which taxes reduce the gross return from banking investments, and how these compare with the effect of taxes on investments elsewhere.

The effect of the tax system on financial intermediation, then, can only be determined by comparing current taxes to taxes under the most favorable and feasible reform alternative. These analytical considerations appear to be largely absent from studies of taxes and financial repression.

Policy Recommendations

This paper highlights a large lacuna in our understanding of financial repression and its causes in the tax system. Since it is widely believed that financial repression is caused in some--perhaps large--measure by tax policy (albeit the belief has not been

supported with analyses), this paper then outlines the way in which such analyses should be performed so as to permit intelligent tax reform.

Four policy conclusions are warranted by the contents of this paper, as well as by the logic and experience of tax reform in many countries. They are:

- Encourage free entry into financial intermediation, subject to prudential concerns, to the maximum extent possible.
- Set tax rates as uniform as possible across industries and sectors.
- Remove controls on interest rates.
- Eliminate transactions or turnover taxes in favor of retail sales taxes on consumption (or VATs) or by increases in income tax rates.

Each of these (and especially the four together) would provide a basis for a healthier intermediation sector and encourage economic development.

INTRODUCTION

Financial intermediation--one of the prerequisites to growth in industrialized countries--is often insufficiently established in developing countries and does not play the role it should in launching development activities. For a long time it was generally believed that monetary and financial development was a consequence of real development, and this partly explains the options adopted in the past. However, an increasing number of economists now believe that development of the monetary and financial sector is a prerequisite for the development of real economic activity.

Thanks to widespread and easy access to international borrowing, many developing countries have deferred active development of the monetary and financial sector of the economy. Over the past two decades, the choice between calling on external resources and mobilizing domestic resources has been such that public authorities have preferred to opt for external financing.

During the same period, many countries, particularly in the developing world, pursued policies that encouraged the use by both borrowers and savers of debt over equity instruments. The perils of the resulting increased leverage became manifest during the recent period of soaring interest rates and generalized scarcity of credit. With stagnant or declining returns from operations as a result of the recession of the early 1980s, the added financial squeeze of the highly leveraged firms has led, in many countries, to a marked increase in bankruptcies and widespread concern over corporate distress.

Against this background, this study that discusses the way in which tax systems, and hence tax reform, in developing countries may promote or hinder the development of financial intermediaries. It is meant to give an overview of the subject for nonspecialists in the field who may be unfamiliar with the subject matter but who find themselves called upon to analyze and recommend public policies to address the issues discussed here.

Financial intermediaries are institutions, such as banks and thrift institutions, that serve as intermediaries between savers and investors. They collect deposits from those holding excess purchasing power--income that people do not wish to spend immediately--and provide it to those who wish to put the income to work immediately, typically by purchasing productive investments. They are paid a portion of the return by the investor and provide some of it, in turn, to the saver.

Their role, fundamentally, is that of collecting, interpreting, and acting upon information, primarily about potential borrowers and their investment opportunities. This gathering and evaluation of information gives rise to "transactions costs," the costs of getting the "excess" income from the saver to the investor. For this activity, intermediaries appropriate a share of the return from the productive investment. As they undertake this role, commercial banks also provide liquidity to the economy, that permits the expansion of money-based transactions and commerce.

The development of financial systems in less developed countries has often been explicitly or implicitly limited by a complex web of taxes and regulations together with pervasive government-directed allocation of loanable funds. (This complex web, often referred to as "financial repression," is discussed in Part I of the paper.) The reasons

why banking has often been singled out for adverse treatment are many--the widespread approval of socialist or central planning models of industrialization, the identification of development with manufacturing industry, identification of banking with colonial interests, and, perhaps, a traditional hostility of agricultural society to money-lenders. In addition to these factors, the chosen forms of treatment also allow governments to collect needed revenue easily from the banking sector.

One aspect of this complex web is the system of taxation and the way financial intermediaries are taxed. In this context, "taxation" must be broadly understood to be all of those mechanisms by which purchasing power is transferred from the private sector to the public sector and to publicly mandated purposes. Of course, this encompasses taxation as it is usually understood by the layperson: tax levies on corporate and personal income, on transactions, and on imports or exports, for example. But it also includes other, "implicit" taxes that are specific to financial intermediation: reserve requirements, interest rate controls, "usury" ceilings and credit allocation schemes, typically together with pervasive price inflation. All of these methods of taxation are discussed in Part II, where a sample of four AID-recipient countries--Botswana, Costa Rica, Jordan, and Zambia--serves as the main source of institutional examples.

The way in which the different kinds of taxes affect the viability of financial intermediation are discussed in Part III, which provides a basic framework for analyzing the impacts of the tax system. Key to this analysis is understanding the way in which after-tax returns serve to allocate capital to various industries, and the way in which taxes act together to affect the after-tax rate of return. This Part also gives some normative guidance in suggesting alternative tax structures.

Building on this analysis, Part IV of the paper examines the broad alternative policies available to governments to promote expansion of private financial intermediation. The policymaker's problem is that of providing a favorable climate for the development of financial intermediation without a needless sacrifice of government revenues.

The development of financial intermediaries is only one aspect of economic development, no matter how fundamental. The intermediation of saving is only one determinant of the overall level and efficiency of saving and investment. Likewise, the banking sector is only one among many potential areas for expanded investment, and only one sector among many that would like to have lower taxes. This paper proposes that a government's need for revenues ought not to prejudice balanced economic development, and that financial intermediation is basic to that development.

I. The Role of Private Financial Intermediaries In Promoting Economic Growth

Financial intermediaries--and financial capital markets more broadly--provide the key and necessary link in promoting economic development. Section A provides a historical perspective on our understanding of this linkage.

Development is first and foremost a process of capital accumulation, of using the output of today's productive capacity to provide a larger and more technologically advanced productive capacity for tomorrow--an observation that applies as much to seed and fertilizer as to factories and machinery.^b The establishment of a dynamic and competitive private system of depository institutions is critical in this process. In addition, the economic advantages of money-based exchange over barter systems is well recognized, and a money-based economy is clearly fundamental to development. Financial intermediaries serve as the institutional mechanism for administering the money supply system. These channels by which financial intermediaries stimulate economic development are discussed in Section B.

Notwithstanding the dual economic roles played by financial intermediaries, many, if not most, developing countries have placed formidable barriers against the development of the banking system. The complex of impediments and its consequence--known as "financial repression" were identified fifteen years ago by Ronald McKinnon. Although the topic of financial repression, discussed in section C, has become a focal

^bThere is a debate within the economic literature as to the importance of capital accumulation per se versus technical change. However, these two are often inextricably bound together, as technical change is often inseparable from new investment. See also the discussion by Dennis Anderson (1987) and the references given there. The classic references are those to the works of Robert Solow.

point for research and for policy recommendations, little attention has been devoted to the role of the tax system in constraining financial development.

A. Financial Intermediation and Economic Development

Economists and historians agree that the process of modern economic growth has been closely associated with the expansion and increasing diversification of financial intermediation. The rough parallelism between economic growth and financial development involves complex causal relationships, some of which are not well understood. The causation is almost certainly not uni-directional. Growth in the production of goods and services and the accumulation of physical capital have stimulated the expansion and adaptation of the activities of financial institutions. At the same time, innovation in financial intermediation has catalyzed the process of real growth.

The pioneering literature on the financial aspects of the growth process is dominated by the work of Raymond Goldsmith and that of John Gurley and Edward Shaw. Several generalizations emerge from that literature and its subsequent elaboration.¹

First, as economic development proceeds, the financial superstructure of the economy tends to expand relative to the real infrastructure. In other words, the network of financial interrelations among decision-making agents in the economy acquires greater density at an even more rapid rate than the network of goods and services transactions. Goldsmith evaluates this phenomenon with his "financial interrelations ratio," the ratio of the total market value of all financial assets to the value of tangible net national

wealth. Increases in the financial interrelations ratio, however, may not continue without limit. Once an advanced stage of development is reached, the financial superstructure may grow only commensurately with the real infrastructure. These Goldsmith generalizations are closely related to the Gurley-Shaw conclusion that the ratio of outstanding primary securities to income rises sharply in the early stages of the financial development of a capitalist economy, but then eventually reaches a plateau.

Second, financial institutions tend to become relatively more important as economic growth proceeds. In particular, the share of financial intermediaries in the issuance and ownership of financial assets tends to rise over time. This trend reflects the growing separation and institutionalization of the functions of saving and investing. In the advanced industrial countries, the proportion of total financial assets accounted for by financial intermediaries has continued to increase even after the rise in the financial interrelations ratio has ceased.

A third manifestation of the links between financial and economic development is an increasing diversity in the types of financial institutions and in the types of instruments in which they specialize. At an early stage of development, banks with narrowly defined functions tend to dominate the financial structure. As economic and financial growth proceed, there is a decline in the banking system's share of the assets of all financial institutions, such as thrift intermediaries, insurance companies, government and private retirement funds, investment companies, finance companies, and securities brokers and dealers. Commensurate with the increasing specialization of the financial system, the relative share of direct intermediation in total financial activity may decline, while financial markets and indirect intermediation become more important. At any

rate, the declining relative importance of the banking system entails a smaller role for direct intermediation through commercial banks.

Evidence about the relative importance and catalytic role of securities markets in financial systems is inconclusive. More research needs to be done, for a variety of countries, before generalizations about indirect intermediation can rest on solid ground. In principle, the extent of securitization of the liabilities of ultimate investors could be strongly influenced by factors other than the stage of development of the financial system.

Consider, for example, the information available to economic agents in a society. Information is unevenly distributed in all societies, including, for example, the information necessary to assess the creditworthiness of borrowers--as pointed out earlier. Because information is differentially available, different agents have widely differing abilities to assess the risk of investments. The expertise of financial intermediaries in collecting and evaluating information is therefore one major reason why they play a vital role in the process of economic growth.

Societies differ, however, in the social conventions and legal requirements that govern the availability of information. Those differences can importantly influence the structure of the financial system. Imagine two societies, one of which has laws requiring firms to disclose comprehensive information about their income statements and balance sheets, whereas the other does not. The society with extensive disclosure requirements, because of its more even distribution of information, would have less skewness in its ability to assess and monitor the creditworthiness of individual firms. Other things being equal, financial markets and indirect intermediation might be considerably more

developed in the society with more public information. The valuations of securities in that society's markets could better incorporate information about creditworthiness. In the society without disclosure requirements, on the other hand, access to information about creditworthiness would be highly skewed. To an even greater degree than in the ample-information society, financial intermediaries would have a comparative advantage relative to the general public in evaluating investment proposals. Other things being equal, a smaller proportion of financial intermediation would be channeled through financial markets.²

B. Financial Intermediation and Capital Formation

Financial saving and investment are the "paper" counterparts of physical capital accumulation. Saving frees up financial "claims" on current production--purchasing power--and those claims can then be put at the disposal of investors for spending on productive investment. Financial institutions and markets provide a channel by which financial saving can be gathered together from savers and provided to investors. This pooling of funds can, by itself, promote growth because it opens to savers uses for their funds beyond those that they themselves can create, and it offers to investors sources for funds beyond those they themselves can provide.³

It is important to distinguish financial intermediaries from capital markets. The latter provide for a direct link between savers and investors in which the former personally hold a financial "instrument" or claim --a share of stock or a bond--on the latter. Capital markets provide an institutional arrangement for creating and issuing these instruments and negotiating their sale or exchange.

In contrast to capital markets, financial intermediaries serve, in fact, as intermediaries between savers and investors. Savers hold a claim--say, a passbook or certificate of deposit--on the intermediary, and the intermediary holds a claim--a note, or sometimes an equity share or bond--of the investor.

In developed--and advanced developing--countries, both sets of institutions do much more than serve as a conduit for saving. They provide incentives that increase saving as well as expertise or information that help to ration funds to investors so that saving finds its most productive uses--thereby promoting the most rapid growth feasible.

The incentive to save is provided by the interest rates paid to depositors. The higher this rate--after inflation and taxes--the greater the supply of saving to intermediaries. At issue in promoting economic growth is the total supply of saving available for productive investment. One source of this is increases in saving, that may be promoted by higher returns to savers. Although economic theory suggests the possibility that higher returns might reduce saving, Olson and Bailey (1981) provide strong reason to believe that reductions in saving would be unusual. But, in any case, the response of total saving to such incentives may be small. Likely of greater importance is the substitution of bank deposits for other assets in savers' portfolios. Thus, a higher real return to deposits can be expected to cause savers to reduce their holdings of inflation hedges and of currency; they may also reduce their "deposits" with moneylenders, that would, other things equal, not result in an increase in "loanable" funds--though it might result in more efficient use of those funds.

Financial intermediaries themselves are primarily institutions that seek out and process information about potential sources and uses for funds. When efficient, they

attempt to attain funds at the lowest possible cost and channel them to the most profitable use. The key role in this process is played by loan officers, the repository of a bank's expertise in evaluating potential lending opportunities and credit risks. However, the overall efficiency of bank management is also important in reducing the bank's costs and therefore its lending rates. The lending rates serve to ration funds to potential investors since, in the absence of policies of credit rationing and allocation, only investment projects whose expected return--adjusted for risk, inflation, and taxes--exceeds the bank's loan rate will be viable candidates for a bank loan. The lower these lending rates--everything else, again, being equal--the greater the volume of productive investment that can be funded from a given supply of saving.

In developing countries, the incentives to save and the uses for saving are often limited by a lack of financial institutions and by government programs that limit the rewards for saving. First of all, the scope of capital markets is often narrow--equity and bond markets are often absent or, where present, are the domain of a small number of participants. Thus, most savers must either hold their own savings or entrust them to one of a limited number of financial intermediaries, not infrequently government-owned.

It is understandable that the scope of capital markets would be limited in developing economies. In order to be more than simple gambling operations for the well-to-do, they require a fairly large number of buyers and sellers and a breadth of standardized financial instruments of varying degrees of riskiness. When this is the case, the risk/return characteristics of each issue are easily communicated to savers and sufficiently narrowly defined to attract an adequate pool of savers desiring those characteristics.⁴ This breadth and depth cannot be provided where the number and size of investment projects is limited.

Most important, though, is the need for standardization. The possible market for stocks and bonds is limited where information about these projects is hard to discover, publicize, and standardize.^c In developing countries, although there may be a few large firms and industries for which information is easily obtained, publicly available, and subject to widely understood accounting standards, most business enterprises are relatively small and it is difficult to gather and communicate reliable information on these businesses and their investment opportunities. This uniqueness and the difficulty of gathering information mean that most investment opportunities, if they are to be financed at all, must be financed by either the business' owner, his family and friends, or by a lending institution with the capacity to deal with the uniqueness of the business's situation. The business, of course, may be a small or medium-sized farm, a cottage manufacturing business, a small retailer or wholesaler, or any of a number of businesses for whom the issuance of financial "instruments" is out of the question.

Two features of this situation are especially important. The first is that the expected return from an investment in one of these businesses may be quite high. A 30-40 percent annual return might be expected from investment projects which, in the

^cA familiar example of the problem can be found at home, in the U.S. market for home mortgages. Each mortgage is typically unique to a household borrower with unique characteristics, a home with unique characteristics, and an agreement between borrower and lender with unique terms. Only in the last fifteen years or so has federal government policy provided an institutional framework--FNMA, GNMA, etc.--that encouraged and permitted the standardization of mortgages to a degree sufficient to allow these to be used in backing securities--mortgage-backed bonds--that could be traded in the capital markets. Prior to this standardization of terms, "quality," and information, no "market" for these instruments could develop. See U.S. Government (1982).

absence of a local source of financing, would not be undertaken.^d This might compare with returns of 5-10 percent or less in large firms in developed basic industries in the same economy. Secondly, the costs of financing are commensurately higher because the costs of gathering information about the project, evaluating the information, and administering the loan are high and because the projects are typically riskier among such firms. Leaving aside risk, the transaction cost may be approximately 20 percent, compared to costs well under 5 percent for large firms.^e

These two facts mean that the application of usury ceilings, for example, will have the effect of foreclosing a net 10-20 percent economic return to the economy, and the funds will more likely be channeled to give the economy a return of 3-7 percent. This same reasoning, then, applies generally to the effects of policies that discourage development of financial intermediation.

On the saving side, the gains from financial intermediation are not limited to the provision of "incentives" as mere encouragement. The reward to saving made available by the institution itself ultimately promotes investment. If savers can only use their saving to finance personal investment opportunities, they may need to accrue a significant amount before their investment can be made--in, for example, an irrigation system. In the absence of a financial intermediary, those savings must be idle until a sufficient amount is accumulated, whereas an intermediary can relend them. In addition, the yield on those savings provide additional savings that can hasten the day when the saver can make his or her own investment.

^dBhatt (1979, p. 9) cites the fact that traders in Haryana customarily charged interest rates (in the curb market) of 30-40 percent per annum, implying that the gross returns to the farmer-borrower often exceeded this amount. He also shows data from the Reserve Bank of India (in Appendix A, Statement V) showing that 43 percent of cultivators in India as a whole have outstanding debt at interest rates exceeding 19 percent.

Intermediaries, though, require competition to be most effective. Competition limits the profits an institution can make by forcing bidding for funds from savers, thus leading to greater incentives for saving and more saving. Competition also forces intermediaries to seek out more profitable opportunities (with greater rewards for economic development) and to charge more market-based interest rates that accurately reflect the cost and riskiness involved in various ventures.

Just as important, competition also leads to the development of human capital in appraising borrowers and projects, expertise often otherwise to be found only in "curb" markets of unofficial moneylenders. In the absence of competition, there is little incentive to seek out savers and borrowers and to evaluate closely the costs and rewards of potential borrowers. Competition puts a premium on the skills of loan officers. In so doing, it tends to minimize the role for bureaucratic administration and political favoritism.

Given the importance of financial intermediation and its widespread inhibition by government policies (see Section C), it is not surprising that informal financial intermediation is pervasive in less developed countries.⁶ This curb market includes both individual moneylenders--whether so by trade or as a sidelight, such as traders and larger farmers,⁷ or in the form of rotating cooperative savings and credit associations such as the chilemba of Zambia.

All of these types of institutions tend to be part of a competitive environment that is largely unregulated and untaxed. However, their small scale limits the degree to which they are part of any nation-wide system that would allow credit to be allocated by market signals from region to region, and also the size of the lending and the degree

of expertise they can develop. From the perspective of policymaking, as discussed later, this means that policies that free up the formal sector and make it more competitive may do so at the expense of the informal sector, posing an important trade-off.

The expansion of a money-based economy is an integral side-effect of the expansion of financial intermediation.⁸ In the absence of banks, money transactions must be made in currency. What is perhaps less obvious is that policies that discourage the holding of bank deposits have the same effect. But policies that limit the availability of banking or that lower the return from bank deposits effectively shift moneyholders' relative preferences towards currency and inflation hedges--such as gold--and away from bank deposits.⁶ The result--cash hoarding--leaves the economy underutilizing the central bank's monetary base (local currency plus bank reserves, sometimes called high-powered money). The monetary base itself is often limited in developing countries by the central bank's own limited reserves of gold and international exchange currencies.

With fewer bank reserves, commercial banks must restrict their lending in order to reduce aggregate deposits to a level consistent with the smaller amount of reserves and the legal reserve requirement. This bank lending restraint means that higher interest rates must be charged to borrowers, there will be fewer funds available for productive investment, and, hence, slower economic growth.

⁶They may also shift savings toward the curb markets.

C. Financial Repression

In developing countries, formal financial intermediaries are often subject to pervasive controls on the interest they can pay to savers, i.e., low interest rates that are further reduced by taxes and pervasive inflation. As a result, savers are generally encouraged to minimize their financial saving, or to hold that saving themselves in the form of commodities such as precious metals, livestock, or consumer durables. Consequently, even a good part of the saving that does occur is not made available for productive investment.^f

The situation is no better for investment. The financial saving that is made available to existing financial intermediaries is subject to taxation, both by taxes as we customarily think of them and by heavy reserve requirements held either as noninterest bearing loans to the government or as government bonds paying low interest. The remainder is often subject to both usury limits and credit rationing.

Under a system of usury limits, loans are required to be made at low interest, which prevents intermediaries from investing in the most profitable but perhaps more risky or costly investments, or those requiring a greater expense to gain accurate information. Thus, ventures that will more rapidly advance development may be starved for funds. With credit rationing or allocation, the limited loanable funds are directed to specific sectors and firms, often undertakings that are better established and hence likely

^fAs noted earlier, some savers will make loans for productive investment through the curb market in this environment, but such loans will tend to be limited to local undertakings, which may not be the most productive investment when evaluated on a national scale.

to be less profitable at the margin. Indeed, such loans are likely to be heavily influenced by cronyism.

Finally, exchange controls and other limitations on the unrestricted working of international currency transactions can both trap funds inside the country and encourage capital flight. Although the latter is widely understood, the former also needs to be recognized. Funds that are trapped within the country must necessarily hold a portfolio of domestic investments, whether gold, cash, or bank deposits used for domestic lending. This sharply limits the ability of savers to diversify their holdings and, consequently may discourage saving.

The pervasive cluster of impediments to financial saving and investment detailed above have been extensively chronicled in recent years under the rubric of "financial repression," so called because their effect is to repress the development of the financial sector of the economy.⁹ The key role played by financial repression in limiting development has been widely documented, and attempting to combat it has become a keystone of structural adjustment policies. The hypothesis underlying these adjustment policies is that a healthy and competitive financial sector (particularly of financial intermediaries) must play a necessary role in advancing development. The policies require limiting inflation and government expenditures, encouraging increases in the number of institutions and their competitiveness, and deregulating (or at least raising) the (a) yields they can pay savers, (b) allocation of their funds, and (c) interest rates they can charge to borrowers.

Although attention to these policies has given rise to a number of studies in this area, very little to date has been written on the topic at hand. It is common in these

studies to find a mention of taxation as one of the features of financial repression, but it is uncommon to find more than that mention. For example, Fry's (1988) comprehensive treatment of the subject of financial repression devotes less than two of its 441 text pages to taxation. Of this, only one brief paragraph--with two examples--is devoted to explicit taxation as opposed to implicit taxation (treated in the remainder of the two pages) through reserve requirements, for example. This is an uncommonly extensive treatment. A comprehensive search of databases of economic literature carried out by AID's library found--in 7 databases--not a single relevant item.

The difficulty may lie in the fact that discussions of financial repression focus on the financial sector, but the financial sector is only one side of the story. The other side of the story is the government's budget: financial repression is a consequence of the scope of the government's activities and the way those activities are financed. If taxes on the financial sector are too high, it may be because government spending is too high or because the tax system discriminates unnecessarily against the financial sector. These are quite different issues, and only the second is within the scope of tax reform.

By and large, the lacuna may be attributed to the differing interests of financial specialists (not taxes) and tax specialists (not finance). The aim of taxation is to pay for the government. Financial intermediaries provide an attractive target for the tax collector. In addition, public goals are often achieved through means other than government spending, such as the sectoral targeting of investment. Government direction of saving and investment may appear an attractive way to achieve these ends, with adverse consequences for financial intermediaries.

For these reasons, the nature of banking systems in LDCs is, in many ways, determined by the need for government revenue. Banking is often a state monopoly or private oligopoly--with only a few noncompeting private firms--that allows the government to tax deposits and loans in a number of ways, and provides the government with a controlled outlet for its debt. By comparison, other incomes and financial flows are difficult to discover and opaquely accounted for, when accounted for at all. Nor is there any other ready market for public bonds.¹⁰

But discussions of taxation in LDCs typically do not touch on financial repression. Most often, analyses of taxes in developing countries focus on narrow, institutional concerns about individual taxes or projects and their effects, rather than on a broad evaluation of the consequences of the system of taxes and spending for the economy. Even where such broader concerns are foremost--as in the 1988 World Development Report of the World Bank--specialists in taxation may not have the latitude or expertise to evaluate the consequences of the tax structure for the financial system. For example, a recent comprehensive volume on the theory of taxation in developing countries, though addressing such topics as "Taxation and Development," "Tax Reform," the "Taxation of Agriculture" (including empirical studies), and "Quantitative Characteristics," has no discussion of the taxation of financial intermediaries.¹¹ The remainder of this study, then, explores this territory.

II. The Taxation of Financial Intermediaries

Financial intermediaries are institutions whose liabilities are funds entrusted to them by households and businesses. These funds can be withdrawn by depositors at a time of the depositor's choosing (subject to varying periods of advance notice depending typically upon legal requirements). Commercial banks use the funds to purchase assets--typically loans to businesses but, in some banking systems, also equity holdings--that pay a return. Thrift institutions such as building societies and savings banks use the funds to lend for home purchases and household expenditures on other durable goods. In each case, the return is then used to pay administrative costs and yields to depositors and to the bank's stockholders.

From the point of view of tax administration, this business arrangement presents two general sets of leverage points for taxation--by which, as mentioned earlier, we mean the transfer of purchasing power from the private sector to the public sector; that is, to publicly mandated purposes. These two sets of leverage points are:

- Transactions with banks: the investor's payment of a return to the bank in interest or dividends and the payment of interest to the depositor. This includes, more generally, taxes that affect the attractiveness of transacting with banks. This is discussed in Section A.
- The bank's profits from its activities: treatment of the income, assets and liabilities of the intermediary itself as a taxable entity compared to other business firms. This is discussed in Section B.

In addition to these pressure points for explicit taxation, the process of financial intermediation gives rise to special kinds of implicit taxation--through interest rate regulation, reserve requirements, schemes of credit allocation, and the interaction of

these with inflation. These apply as well to the same two sets of pressure points as explicit taxation. This is discussed in Section C.

Although all these leverage points are treated separately here, it should be clear that they are related--and the taxation of each of them is related to the taxation of the others. For example, a business income tax will tax all capital income, including bank profits. Likewise, all income taxes will have provisions for the treatment of interest and dividends. Thus, an income tax system will generally strike at both sets of pressure points. In all cases, the important question--as will be made clear in Part III--is whether and to what degree the tax system discriminates among alternative activities, and whether the benefits of this discrimination exceed the costs.

A. Transactions and The Taxation of Capital Income

Perhaps the most striking feature of explicit tax systems in developing countries is that, formally at least, they are much the same as tax systems in developed countries. It is typical to find payroll taxes, personal income taxes, and corporate taxes,⁶ and the legal structure of these taxes does not appear to differ systematically from what one finds in the developed countries. Although the systems certainly differ from country to country, they also differ in many of the same ways among the developed countries.

⁶Of course, there are other taxes also familiar in developed countries--tariffs, export duties, sales taxes, and severance taxes, as well as the appropriation of the profits of public sector enterprises. However, with few exceptions, these are not typically relevant to the topic at hand.

As in developed countries, both the personal and corporate income taxes in developing countries tax capital income. Capital income includes^h interest, dividends, and capital gains--gains (or losses) arising from the change in the value of assets between their purchase and their sale. Likewise, payment of some of these items may be considered deductible--that is, they may be subtracted from income before calculating the tax liability.

If this were all there were to the process, there would be little identifiable effect on financial intermediaries--as is discussed in Part III. However, these items are not always treated in an identical fashion. Interest is generally deductible when paid and taxable when received, though not all kinds of interest may fit this pattern. Similarly, dividend payments may or may not be deductible from taxable profits, and their receipt may or may not be taxable. Moreover, some dividends may be treated differently from other dividends.

The pattern of exceptions is important because these provisions affect the demand for intermediated loans and the supply of deposits. Discrimination among alternatives that, to the saver or investor, serve the same end may easily alter the course of development of intermediation and the institutional form that financial development takes.

Table I sets out the major provisions affecting the tax treatment of items of capital income in Botswana, Costa Rica, Jordan, and Zambia. The itemization is meant to indicate the common variants of taxation in developing countries.

^hBusiness profits are discussed in the next section.

TABLE 1: EXPLICIT TAX PROVISIONS IN FOUR COUNTRIES

	INTEREST		DIVIDENDS(2)		CAPITAL GAINS	PENSION AND BENEFIT FUNDS
	PAID	RECEIVED	PAID	RECEIVED		
BOTSWANA	BUSINESS: deductible if business expense	BUSINESS: taxable as ordinary income except: nontaxable if from --outside Rand Monetary Area --resident building societies --Post Office Savings Bank --national development bonds	BUSINESS: deductible but 15% withholding tax credited to recipient	BUSINESS: taxable as ordinary income except: nontaxable if from --outside Rand Monetary Area --resident building societies --Post Office Savings Bank --national development bonds --intracompany source	BUSINESS: taxable as ordinary income are gains on: --bus. and res. property --financial instruments except: shares or debentures of a "public" company or one so designated by Finance Min.	BUSINESS: Contrib. deductible up to 10% of total wage bill
	INDIVIDUALS: deductible if business expense plus home mortgage interest up to 30,000 Pula.	INDIVIDUALS: same as Business	INDIVIDUALS: NA	INDIVIDUALS: same as Business and also exempt: --members' dividends from a cooperative thrift or mutual loan association	INDIVIDUALS: Same as Business except: --50% of gain exempt --gains on home exempt --special low-income rate(3)	INDIVIDUALS: Contrib. deductible up to 1500 Pula p.a. Benefits partially taxed when received.
COSTA RICA	BUSINESS: deductible if business expense; withholding tax for payment to non-res.	BUSINESS: taxable as ordinary income except: nontaxable if from --foreign source -- (1)	BUSINESS: Not Deductible and 5% withholding tax on dividends on bearer shares; (none on registered shares)	BUSINESS: exempt but withholding tax	BUSINESS: taxed as ordinary income if realized in normal course of business --15% final cap. gains tax on nonhabitual transfers of immovable property --other cap. gains exempt	BUSINESS: No provision
	INDIVIDUALS: No data	INDIVIDUALS: same as Business	INDIVIDUALS: NA	INDIVIDUALS: exempt but withholding tax	INDIVIDUALS: same as Business	INDIVIDUALS: No provision
JORDAN	BUSINESS: deductible if business expense	BUSINESS: taxable as ordinary income except nontaxable if from --foreign source --banks and domestically licensed financial inst. --Treasury bills --Development bonds --Public Institution Bonds --debentures of public shareholding companies; also, certain receipts of non-residents	BUSINESS: Not Deductible	BUSINESS: exempt	BUSINESS: exempt	BUSINESS: Contrib. deductible
	INDIVIDUALS: deductible if business expense plus home mortgage interest up to 2000 dinar incl. extended family	INDIVIDUALS: same as Business	INDIVIDUALS: NA	INDIVIDUALS: exempt	INDIVIDUALS: exempt	INDIVIDUALS: No apparent deduction for Contributions Benefits exempt
ZAMBIA	BUSINESS: deductible if business expense	BUSINESS: taxable as ordinary income except nontaxable if from --Zambian savings certificates --development bonds; also, receipts of non-residents on certain public loans	BUSINESS: Not Deductible and --20% withholding tax on dividends to resident companies and nonresidents; --30% to resident individuals exempted are: --dividends from a commercial farm in first 5 yrs of operation --div. from nonres. sources	BUSINESS: exempt when --withholding tax paid, --5-yr commercial farm, --or from nonresident source	BUSINESS: taxed as ordinary income plus 5% transfer tax on property including equity shares but apparently excluding debentures	BUSINESS: Contrib. deductible up to 20% of taxable wage bill
	INDIVIDUALS: deductible if business expense plus home mortgage interest	INDIVIDUALS: same as Bus. but also exempt if from: --savings account with Nat'l Savings and Credit Bank of Zambia --deposits or investments in registered building soc. --savings or deposit account in a commercial bank	INDIVIDUALS: NA	INDIVIDUALS: same as Business	INDIVIDUALS: Same as Business	INDIVIDUALS: Contrib. deductible up to least of --assessable income --15% of taxable emoluments --2400 Kwacha Benefits taxed as ordinary income

(1) For residents of Costa Rica, income derived from securities denominated in foreign currency issued by the State or State-owned banks is fully exempt.

(2) In Botswana, dividends are defined to include amounts distributed by building societies.

(3) In Botswana, a special tax rate of 10% applies to cap. gains of individuals whose income tax rate did not exceed 20% in each of the 3 preceding years.

NA=Not Applicable

SOURCE: INTERNATIONAL BUREAU FOR FISCAL DOCUMENTATION, RECENT COUNTRY REPORTS

The first two columns of the table show the treatment of interest, with the first column documenting the tax treatment of interest payments and the second, of receipts. In every case, business interest is deductible--including a bank's payments of interest on its deposits and on its own debt--so long as the debt is incurred for business purposes. Individuals are also permitted to deduct their business interest payments; however, with the general exception of home mortgage interest, deductibility of consumer loans is not permitted. In Botswana and Jordan the mortgage deduction is capped, but not in Zambia. No information was available on the deductibility of consumer interest payments in Costa Rica.

To assure that interest income is taxed once, the deductibility of payments should be matched with a tax on receipts. Though this is typically the case, each country provides numerous exceptions in which interest receipts from certain sources are provided favorable exception. Interest received from state agencies is often exempt--national bonds in Botswana, Jordan, and Zambia (and, in one special case, in Costa Rica); and from the Post Office Savings Bank in Botswana. This pattern would, by itself, suggest a government attempt to reduce public sector outlays (or gain loans at lower interest rates). However, both Jordan and Zambia provide broader exemption to interest from deposit accounts, including private intermediaries.

The third and fourth columns of Table 1 show the tax treatment of dividends paid and received, respectively. Here, as in developed countries, there are several different models. In Botswana, dividends are deducted when paid and taxed when received, with exceptions paralleling the treatment of interest. In contrast, Costa Rica taxes the payment--by not permitting payments to be deducted from a business's taxable income. This pattern appears to be followed in Zambia as well, but Zambia also taxes

the receipt with a flat withholding tax, thereby implying some double taxation.ⁱ Finally, Jordan completely exempts dividends from taxation both to the payor and to the recipient. Altogether missing from this sample are the more common "classical" and "imputation" systems of the developed countries.^j

The fifth column summarizes the treatment of capital gains. This is important because the holding of assets on which gains may be realized serves as an alternative to holding bank deposits. The full range of tax structures is evident here, varying from full taxation in Zambia (plus a transfer tax) to complete exemption in Jordan. In between, Botswana taxes gains as ordinary income except gains on shares of designated "public" companies, while Costa Rica exempts transfers of financial instruments and movable property, leaving only gains on real property to face taxation as ordinary income.

Finally, the last column sets out some related provisions on the treatment of contributions to, and benefits from, employer-provided benefit schemes, especially for retirement. In such funds, the business concern itself may be serving as an intermediary financing its own activities or purchasing a portfolio of financial instruments with the tax-favored saving made available to it. The effect is to subsidize the return to this particular form of intermediation, that is unlikely to lead to the same sort of

ⁱThere is also a minor withholding tax in Costa Rica, but its aim appears to be to shift the nature of equities from bearer to registered form, rather than to gain revenues.

^jIn the "classical" system, all company profits are taxed, and dividends are taxed to the recipient, giving rise to an apparent "double taxation" of dividends. In the "imputation" system, some tax is withheld by the payor at a standard rate, and the tax is credited as part of the recipient's tax liability.

development investment as might be undertaken by competitive private financial intermediaries.

These do not exhaust the particular forms of explicit taxation that may be applied to the capital income related to financial intermediation. Sales taxes and other taxes levied on transactions offer another means by which the return to other businesses and individuals from dealing with banks is reduced. In systems of consumption taxation, the problem of taxing financial services presents a difficult problem of tax policy.^k As a result, the taxing of such services is usually limited in these schemes. But broader taxes on gross receipts (i.e., loan interest payments) of financial intermediaries are reportedly not uncommon,¹² though none appear in our sample. Both Turkey and the Philippines have had them, at a rate of 10 percent in the former and 5 percent in the latter.¹³

B. Taxing the Intermediation Industry

In essence, the type of tax provisions identified above affect the demand for the services of financial intermediaries on both sides of the ledger. Related to this, they increase the "spread" between borrowing and lending rates of interest. Once the demands for bank services are determined, the next question is how much of the ensuing profit the intermediary may retain and how much is paid to the government. This concerns the explicit tax treatment of the bank itself.

^kThese difficulties arise because a consumption tax should tax only the intermediation costs--the spread between borrowing and lending rates--and, of these costs, only those arising from consumer loans. This presents obvious administrative difficulties. See, for example, Quick and McKee (1988) and the references given there.

In the four countries we have surveyed, there is (with one exception) generally no especially favorable or adverse treatment afforded to banks according to the available information. They are treated as ordinary business concerns, so that any two private intermediaries of different types would be treated just as a business in an "ordinary sector" of the same size and profit level.

The one exception to this occurred in Jordan. Jordan had a schedule of progressive rates on business income, with the lowest rate of 5 percent applying to businesses with taxable income less than 1000 dinar and the highest rate of 55 percent applying to income over 36,000 dinar. However, industries in different sectors face different, sector-specific caps on the highest rate they pay. For example, industrial, health, and educational public shareholding companies face a rate no higher than 35 percent without respect to income. Other public companies and some private companies are capped at 38 percent, and the remaining private companies outside the financial sector are capped at 40 percent. But public financial companies are capped at 50 percent and private financial companies at 55 percent. Thus, notwithstanding other nondiscriminatory features of the system vis-a-vis intermediaries, the taxing of intermediaries themselves actually discriminates quite heavily against them as well as against other firms in the financial sector, including insurance and brokerage firms.

Although there is the formal appearance of uniformity of treatment between the financial and other sectors in the remaining countries, the presence of sector-specific investment incentives for other sectors constitutes an implicit bias against intermediaries. In Costa Rica, for example, a five-year tax holiday is granted for certain new medium-scale manufacturing facilities. Zambia provides a comprehensive set of tax incentives for approved investment projects (for which financial intermediaries do not appear to

qualify). The incentives include the deductibility of 50 percent of total salaries paid to Zambian manpower from taxable income and a five-year tax holiday on dividends. Employment taxes are also granted an exemption. Jordan also has a comprehensive system of investment incentives that provides a long income-tax holiday.

In such cases as these, where special sectoral benefits are granted, the implicit bias derives from the fact that government expenditures are not reduced by the tax favoritism, so the overall level of tax rates must be higher to gain the needed tax revenue on a smaller tax base. The higher rates are paid by investors in nonfavored sectors, including financial intermediaries.

C. Implicit Taxation of Financial Intermediaries

In addition to the usual explicit forms of taxation levied on financial intermediaries and on the income flows associated with their business, three forms of regulation are customarily applied to banking firms: excessive reserve requirements, interest rate controls, and systems of credit allocation. The resulting implicit taxes may discriminate heavily against depository institutions.¹⁴

Controls on interest rates payable to banks are generally viewed as a means to foster fairness. They prevent "usury." That they are taxes, even though they do not yield revenue to the government, can be understood by comparing them to an alternative method of achieving the same end. The alternative would be to allow the bank to charge whatever interest rate it wished on a loan, to tax the bank the full amount of the difference between the actual interest rate and the desired usury ceiling, and to return that money to the borrower as an income transfer. This alternative would yield exactly

the same result as having a usury ceiling, but the administrative costs to the government would be higher and the revenue and expenditure flow would appear on the government's budget.

Restrictions on payments to depositors typically have a somewhat different justification--discouragement of competition among intermediaries for funds. Like usury ceilings, the effect is to reallocate the interest that would have been paid. That hypothetical interest is implicitly redirected to other uses in the economy, but the uses need not be quite as obvious as in the case of usury ceilings. For example, they may (a) make government bonds or government-sponsored savings institutions more attractive uses for savings, (b) increase the profits of monopoly banks in noncompetitive banking systems, or (c) ultimately serve to reduce borrowers' costs.

In each case, the implicit tax is made steeper by inflation. Since controlled interest rates are typically governed in nominal terms, with no adjustment for inflation, inflation reduces the "real" rates involved. Thus, for example, a nominal interest ceiling of 10 percent implies a 10 percent loss in the purchasing power of a deposit when the inflation rate is 20 percent.

Some recent data on Zambia in Table 2 provide a striking example of such fixed rates. With the exception of inflation as measured by the official wholesale price index during 1981-1982, none of the controlled interest rates reported by the Bank of Zambia exceeded the inflation rate for the five year period, so that depositors (and other holders of financial claims) typically suffered negative returns on their wealth during the period. (The period 1981-1982 may have been a period of some price controls, though we were unable to verify this speculation.) One ameliorating circumstance, though, is

TABLE 2
Interest Rates in Zambia

	1979-1980	1981-1982	1983
Central Bank Rate (Avg.)	6.50	7.00	10.00
Treasury Bills (Avg)	4.50	6.00	7.50
Deposits:			
<u>Commercial Banks:</u>			
Savings Account	7.00	7.00	8.00
Short-term Deposit	4.75	4.75	4.75
3-6 Month Deposit	7.00	7.00	7.00
6-12 Month Deposit	7.50	7.50	8.50
12+ Month Deposit	8.25	8.25	8.25
<u>Post Office:</u>			
Savings	4.25	4.00/4.25a	4.25
<u>Building Societies:</u>			
Savings Shares	4.00	6.25/4.00a	4.00
Investments Shares	6.25	7.25/6.25a	6.25
Loan Rates			
<u>Commercial Banks:</u>			
Deposits	7.25	9.50/7.25a	9.25
Overdraft (minimum)	9.50	8.00/9.50a	13.00
Bills Discounted (up to 120 days)(minimum)	9.50	10.25/9.50a	13.00
<u>Building Society Mortgages:</u>			
Private Resident. (min)	8.00	8.00	2.00
Commercial and Industrial (min)	10.25	10.25	14.00
Inflation Rate (ann. avg.)			
Consumer Prices	11.4	10.4/13.2a	17.8
Wholesale End-Use	16.5	5.3/6.7a	24.1

a: First figure given is for 1981, second figure for 1982.

SOURCE: Bank of Zambia, Report and Statement of Accounts for the year ended 31st December 1985.

provided by the general tax exemption for these interest receipts in Zambia, as indicated in Table 1. However, all this means is that the data in the table are an accurate portrayal of real (that is, inflation-adjusted) returns, and no further reduction was caused by income taxes.

On the other side of the ledger, borrowers were heavily subsidized by the controlled interest rates, paying--at least at the minimum--rates less than inflation. Though actual rates may have been higher than the minima, this also needs to be offset against the deductibility of business and home mortgage interest.

It is worth noting that the Zambian authorities undertook a turnabout in September 1985, eliminating interest rate controls.¹⁵ The policy change occurred in an environment of accelerating inflation, with consumer prices advancing at an annual rate of 32.7 percent and wholesale prices at over 47 percent, with both rates increasing. The treasury bill rate immediately jumped from 9.5 percent to 16 percent and moved further up to over 23 percent by yearend. Deposit and loan rates also moved up, but not by enough to exceed inflation.

The central bank, in its annual report, stated that achieving positive real interest rates was not its goal. The curious fact is that supposedly free-market rates followed this guidance. However, one of the striking features of financial intermediaries in developing countries is that, even where private, they are often not competitive. This matter is discussed later.¹⁶

Reserve requirements serve as a second means by which financial intermediaries are implicitly taxed. It is typical for banks to be required to hold a fraction of their

deposits as a deposit with the central bank. These deposits customarily pay no interest to the bank. Equivalently, they may be thought of as paying a fixed nominal interest rate of zero. In addition, a portion of vault reserves must be held as government securities, again paying a fixed nominal interest rate.

Interest-free deposits at the central bank are equivalent to the government's taxing away the interest that could have been earned on the deposits. Looked at another way, the government receives an interest-free loan of the reserve deposits (except in those countries, such as the Philippines, where interest is paid on reserve deposits).¹⁷ Furthermore, any mandatory requirement for the central bank to hold the reserves in the form of Treasury bills provides a ready market for government securities that lowers the government's borrowing costs. Finally, inflation again increases the implicit tax levied by these means.

The Central Bank of Zambia provides no explicit statement of its reserve requirements in its annual report, though an estimate from indirect information provided in graphical form suggests an average of around 14 percent. In contrast, the Central Bank of Costa Rica, in its annual report for 1985, explicitly states its reserve requirements as follows:¹⁸

- 32 percent for sight deposits (less than 30 days)
- 20 percent for 30-180 day deposits
- 10 percent for 6 months+

For comparison, the maximum reserve requirement in the United States is 12 percent, though for many purposes it is 3 percent.¹⁹ In the case of Costa Rica, it is

worth noting that consumer price inflation registered 11.7 percent from the fourth quarter of 1984 to the same quarter of 1985. Hence, and assuming the government does not pay interest on reserve requirements (about which we had no information), 32 percent of demand ("sight") deposits earned a return of about minus 12 percent for the year. The consequence is a cut in the return to the depositor and/or a boost to the rate that must be paid by borrowers to make up the difference between the negative return on reserve requirements and any positive return that could be earned elsewhere. One such "elsewhere" is in foreign bank accounts.

The third aspect of informal taxation is the prevalence of systematic schemes of credit allocation in developing countries. In these schemes, financial intermediaries are directed to give priority to lending to certain specified sectors or firms. As noted earlier, interest rate subsidies to borrowing make borrowing attractive, so that demand for loans typically exceeds supply. These loans are then rationed according to government directives based upon development plans or objectives, combined with, perhaps, political and personal influence. In these cases, especially favorable loan rates might also be provided. In effect, then, a scheme of government redirection of saving and investment occurs without crossing the government's books of account. We were unable to document the presence of such schemes in the four focal countries examined here, but expect their existence in all four countries, particularly in Zambia.

Part II has identified the ways in which financial intermediaries are taxed in developing countries. In general, the formal and explicit system of taxation did not appear to discriminate against financial intermediaries--with a few exceptions where state enterprises and activities enjoyed tax preferences on their payments. However, there was some hidden discrimination caused by the fact that other, nonfinancial

enterprises were often favored, and such favoritism was not available to the financial sector. None of the countries in the sample appeared to levy indirect taxes on financial transactions, though such practices are not uncommon elsewhere. In addition, it should be added, the fact that financial institutions are part of the formal sector of the economy implied discrimination against them and in favor of informal activities, including the curb market, where no taxes are paid. Finally, very heavy discrimination was visible in the levying of implicit taxes, that are designed for just this purpose.

It should not be concluded from this summary that all developing countries follow all these patterns, nor that no developed countries do so. Rather, the often noted prevalence of financial repression in developing countries is a reflection of the fact that, by and large, these patterns tend to be more prevalent and more onerous in developing countries.

III. Evaluating The Effect of Tax Structures on Financial Intermediaries

It is common to find studies demonstrating that taxation has ill effects.²⁰ Such studies serve a worthwhile purpose in directing our attention to the economic costs associated with taxation in general or with specific forms of taxes. However, they may be of limited value in directing tax reform in any given set of circumstances or in analyzing the likely effects of a given tax structure on an industry sector like financial intermediaries. These effects, and reforms designed to ameliorate them, must first be understood as problems in public finance.

The fact that taxes are used to finance government activity means some ill effects of taxation are unavoidable. Once a government has settled on its program of spending and other activities, even the best designed tax system will inhibit economic performance. In an ideal world, governments would balance the benefits of their activities against the economic costs of taxation so as to maximize the net gain to the economy from their program. But, as a practical matter, both government programs and tax systems evolve over time as gains and costs make themselves clear through economic events and political pressure. How, then, does one break into this pattern to analyze and reform the tax system?

The common starting point is to accept government programs and spending plans as given. This does not mean accepting current plans as given; rather, it means projecting a feasible path for spending and designing a tax system to meet those revenue requirements. This, broadly understood, is the notion of "revenue neutrality." Once such a path is recognized, the needed tax revenues will involve economic costs, and the goal of tax design is to minimize the sacrifice of economic growth taxes entail.

Taxes have two effects. First, they redistribute income from the private to the public sector. The size and consequences of this effect are determined by the spending plan. Second, taxes alter the financial incentives faced by taxpayers: they alter the returns from working, saving, and investing. In these changed incentives lie the consequences of the tax "system" or "structure," as apart from the consequences of the overall level of taxation. The latter unavoidably reduces returns, but the former allocates the reduction across different groups and sectors of the economy. Some groups or sectors will fair relatively worse, and others will fair relatively better. Some may even be better off than without the tax system--there may be a tax subsidy. The degree to which the tax system discriminates, and the directions in which it discriminates, determine the effects of the tax structure on economic growth and development. If the discrimination is unnecessary or, on balance, unproductive to economic development, it ought to be abandoned.

In this context, financial repression can be seen as the consequence of a tax system that may discriminate too heavily against financial intermediaries. But this is not necessarily the case. As stated earlier, there appears to be very little, if any, literature properly analyzing the patterns of tax discrimination in economies with financial repression. But, in addition, even if the discrimination exists, it may not be readily avoidable. It may be that revenues can be raised from intermediaries at a lower cost to the economy than they can be raised elsewhere. Again, this is a question that begs to be answered, but no one appears to have attempted the analysis.

The remainder of this Chapter discusses the way in which the needed analyses ought to be performed. As a practical matter, then, it highlights those analytical problems that need to be recognized by any tax advisor to a government even in the

absence of extensive formal analysis. Section A discusses the notion of the "tax wedge" or "marginal effective tax rate." This is the appropriate measure of the influence of the tax system on financial returns. It discusses how this measure influences the activities of savers and investors. Section B applies the concept to investment in financial intermediaries. Finally, Section C places these notions in the context of revenue neutrality and discrimination.

A. The Tax Wedge²¹

Taxes--and monopoly profits of intermediaries--constitute a "wedge" between the gross return from an investment project and the after-tax returns to those of the private sector involved in the project either as savers or investors. The wedge reduces the amount of the taxed activity.

A simple example will help clarify this basic notion. A business borrows \$1000 directly from a friend of the owner in order to finance an investment project. The project will pay itself back after one year and will be terminated, and will also pay a gross return of \$100. The borrower agrees to pay the lender 5 percent, or \$50, in addition to the repayment of balance at the end of the year. There are business and personal income taxes at a 10 percent rate.

In this example, the business recognizes a gross profit of \$100. Assuming it could deduct the interest cost, its after tax earnings are \$45. The owner pays another 10 percent personal income tax and realizes \$40.50. The lender pays \$5 in personal income tax and realizes \$45. The total tax wedge on the investment is \$5 (on the business), \$4.50 (on the owner), and \$5 (on the lender). The tax wedge is thus \$14.50. As an effective

tax rate at the margin (called the "marginal effective tax rate," or METR) this is 14.5 percent. Clearly, the higher is this rate, the lower is the combined return to be allocated among lender and borrower, and the smaller is the incentive to undertake the investment in this way, or perhaps to undertake it at all.

Now consider a more realistic example involving intermediation: a saver's decision to place funds on deposit at a bank, that will in turn lend the money to a small manufacturing investment. The project will create ("gross") profits for the investor (the manufacturer). Out of these profits must be paid taxes and interest to the bank, as well as a return to the owner if the project is to be regarded as worthwhile. Out of the bank's return the bank must pay taxes, its costs, a return to its depositors and, if the bank is to continue, a profit to its owners (out of which tax must also be paid). Finally, depositors must also pay tax.

In this transaction, there is a "tax wedge" and an "intermediation wedge." The former consist of the government's tax take, that reduces the returns from the project realized by the lender and the borrower. The latter is the cost of intermediation, that will also be influenced by the taxes on the bank--both in this transaction, and, broadly, in the scheme of taxation affecting intermediaries.

The scheme of taxation on intermediaries themselves, apart from this one transaction, will influence the evolution of financial institutions and, thereby, the scope for monopoly profits and inefficient operation. Consider a third example, central to the topic of this paper, of a (wealthier) saver who may wish to invest, directly or indirectly, in banking by starting a bank. This saving-investment transaction may be undertaken directly, or by lending to the bank corporation or purchasing its equity. As such an

undertaking seems less likely to be intermediated, the question is how much the total profits of the new bank and return to the saver-investor are reduced unnecessarily by taxes: What is the METR, and is it "too high?" This example will be taken up in the next section, while the remainder of this section concentrates on the previous example: the taxation of intermediated saving and investment--taxes affecting the use of intermediation.

How big are taxes on intermediation? Rather than use the METR on intermediated transactions, analysts interested in financial repression have tended to analyze the size of the intermediation spread (including taxes) between borrowing and lending rates and, sometimes, the share of taxes in the spread.

Although no calculations of the effects of taxes on intermediation spreads appear to have been done for the four countries in our sample, other calculations for the Philippines and Turkey may not be unrepresentative of many developing countries.²² Ghanem (1986, p. 13) states that in the Philippines during 1985 "spreads averaged 16.4 percentage points; of which around 7.2 percentage points resulted directly from the different taxes on intermediation." Hanson (1986, p. 4) gives a more complete accounting for Turkey, breaking down the 78 percent per annum lending rate as follows:

Deposit rate:	44 percent
Operating cost:	8
Reserve Cost:	19
<u>Explicit Tax:</u>	<u>7</u>
Lending Rate:	78

If we allow the possibility that perhaps 7 percentage points of the 19 percent reserve requirements are an implicit tax, the tax burden on the lending rate would come to a little under 20 percent of the lending rate.

Neither set of figures includes any implicit tax wedge from interest rate controls and credit allocation, that will affect borrowing and lending rates directly, or the opportunity to borrow. In addition, the tax scheme as a whole may raise the amount attributed to operating costs. For example, as we saw in the data on interest rates in Part II, the effective subsidy to borrowing makes borrowing quite attractive. It also makes default or late repayment attractive, yielding LDC banks greater loan losses, that are incorporated in the figure on operating costs. In addition, lack of competition may simply result in higher operating costs through reduced efficiency.

These measures suffer from another key shortcoming. They do not consider taxes levied outside the bank itself. The primary set of such taxes are the income taxes tabulated in Part II. On the borrower-investor's side, the countries in our sample levy their normal income tax on the entrepreneur's income, some of which are implicitly wages for management, but some of which may be returns from a proprietor's investments. Alternatively, if the owner's return from his investment is channeled through interest or dividend payments, these are often, but not always taxed.

Offsetting these taxes is the implicit subsidy to the borrower--mentioned above--that comes from low controlled lending rates. Given that this subsidy offsets an identical "implicit" tax on the bank, one effect of the subsidy may be to limit a bank's possible monopoly profits. However, this arrangement is likely to be less favorable to

economic growth than a competitive banking sector with no monopoly profits and uncontrolled lending rates.

On the saver's side there are also taxes on interest income from deposits--though not in all of our countries. In addition, however, low controlled deposit interest rates also function as a tax on the saver.

In summary, the calculation of "spreads," and the tax wedge contained in them, is a far from accurate depiction of the tax wedge relevant to intermediated savings-investment decisions in the economy. Instead, calculations of the marginal effective tax rates on intermediated saving-investment are needed, and should be compared to similar calculations for other common channels by which saving makes its way into investment projects. Only these calculations can tell us whether and to what extent tax systems discriminate against the activities of financial intermediaries.

It would be interesting to simulate the effects on economic growth of reducing the tax wedges, though no such estimates appear to have been made. Fry (1988) presents estimates showing that financial conditions--primarily the real interest rate on deposits--do affect the levels of saving and investment, and hence economic growth. He also shows that the interest sensitivity of demand for financial assets is far higher than for national saving. This suggests that much of the impact of financial liberalization comes about by causing savers to hold their assets in depository institutions rather than in inflation hedges or curb market deposits. Each of these results seems to imply that the adverse impact of tax discrimination could be substantial. It would appear that his work could be extended to quantify the some of the impacts of taxes in this framework with the use of METRs.

B. The Tax Wedge On Banking Investments

The analysis of spreads and tax wedges on intermediation and comparable saving-investment channels is necessary for an understanding of the incentives provided by the tax system for using--or for avoiding the use of--financial intermediaries. It does not address directly the effect of taxes on the incentive to commit--or expand--resources in intermediation. This incentive is given by the after-tax return to new investments in intermediation, investments such as the establishment of a new bank or branch. We have found no analysis of this incentive, or of the effects of taxes on it in developing countries. One reason for this is that the provision of incentives for building such private institutions has not been a policy priority.

Another reason perhaps lies in the general organization of financial intermediation industries in developing countries--there are already "too many" banks.²³ As indicated earlier, these are largely the preserve of government (or quasi-government) enterprises and/or of a limited private oligopoly of a few banks. In such a system, where price competition is also limited by controls on interest rates, two features can be expected. First, and notwithstanding the tax burden, banking will be highly profitable for those in the industry, but profitability will not attract new entrants. Many tax costs will be passed on to customers and reduce the volume of intermediation. Those that cannot be passed on will reduce what are in any case excessive profits.

Second, to the extent institutions compete, they will do so through other means, including an excess of branches. Both of these imply that, if the lack of "price" competition and barriers to entry are ignored, developing countries may largely appear to be "overbanked," and this is often the case.

A third attribute of such systems is that intermediaries have often failed to lend beyond a limited number of safe and rewarding (and often mandated) sectors. Thus, governments have viewed other particular sectors, such as agriculture, for example, or particular development areas, as needing special attention. They have therefore created a number of specialized development banking institutions. These do not appear to have mobilized domestic funds more effectively or to have enjoyed a successful record in their lending, but they have added to the fragmentation of the intermediation sector.

With these features of the sector in mind, then, the issue is what role tax policy plays. If entry into the banking sector were permitted, how would taxes affect the desire of potential investors to compete in the sector? The critical variable in the analysis is the after-tax rate of return to investment at the margin. Providing there is little restriction on entry into banking, investors will enter the industry if the after-tax return to it is more favorable than elsewhere.

A comparison of the after-tax rate of return in intermediation to that achievable elsewhere is really part of a multidimensional calculation. Potential investors have different interests and areas of expertise. In addition, banking may be more or less risky--the return may be more or less variable--than in other sectors, depending upon the country. Finally, in a competitive environment at least, returns will vary over time, increasing as expertise is gained and declining as competition increases. All of this together means that, rather than being a question of whether returns are higher in banking than elsewhere, the question is whether, other things equal, higher after-tax returns in banking will lead to more banking. If so, then allowing entry and reducing taxes will increase the supply of competitive and efficient intermediation.

How ought the potential role of taxes to be evaluated? In the usual academic computations of tax wedges on investment, the pretax gross return is assumed to be given. However, this seems misleading in the current context. Because of the administrative visibility of bank activities and the many pressure points it offers for tax collectors, the gross pretax return will be influenced by taxes--through all of the taxes on transactions identified earlier in this paper. Thus, the METR on intermediated transactions discussed in the previous section will influence the gross pretax return from banking investments.

To make calculations of the METR on investments in banking, then, the analyst needs to make a more complex set of assumptions. For example, one might assume that an investor in a manufacturing project is willing to borrow from a bank to make an investment and to pay the bank a market interest rate. At the same time, a saver would be willing to lend the money through the bank for the project at a market interest rate on deposits. To intermediate the loan, the potential banker must invest some fixed amount.¹ With these assumptions, then, one can compute a potential pretax return to the investment in the absence of both implicit and explicit taxes. The tax wedge consists of the difference between controlled and uncontrolled borrowing and lending rates, transaction taxes, reserve requirements, income taxes on the bank, and income taxes on the potential banker.

The most subjective part of such an analysis is the assertion of some hypothetical market interest rates for borrowers and lenders. One way to approach this problem is to

¹The discussion is purposely framed in a simple fashion and discusses a marginal investment to intermediate a marginal loan. This framing of the problem is for the sake of discussion only. Investments required to enter banking are large, and an accurate portrayal of the problem would require a more realistic assumption about the size of the investment and about the volume and mix of deposits and loans.

set bounds on the problem using two alternatives. One alternative would assume that the market and controlled rates would be the same. The other would be to assume that lenders and borrowers each require the average after-tax return available elsewhere in the economy, and that the remainder would accrue to the bank.

Such computations can not stand alone. The effect of tax policy must be understood as stemming from discrimination, for reasons discussed in the following section. This means that the total effective tax wedge on banking, computed as above, needs to be compared with relevant alternatives. One such alternative is that of becoming a banker in the informal sector. The other is that of investing in other, nonfinancial sectors. As we saw earlier, many countries--such as Zambia--have rather elaborate systems of tax incentives for investments in alternative sectors. The effect of tax policy on intermediation must be evaluated by comparing these alternatives to the alternative of entry into banking.

C. Discrimination and The Government's Budget

To frame any analysis of the effect of taxing financial intermediaries, the constraint imposed by government spending must serve as backdrop. To the extent government spending is unavoidable or unchangeable, the total tax burden on the economy is given, and tax policy is limited to allocating the burden among possible taxpayers.

Of course, even then the burden may not strictly be fixed, since some tax structures may yield a healthier economy and more revenues than other structures designed to raise the same revenue, but without including this "feedback" in the

calculation. For example, reducing the tax on financial transactions can be expected to induce depositors and borrowers away from the informal sector, thereby yielding at least some additional revenues. Cutting required reserves may permit banks to pay higher deposit rates (where allowed), giving rise to more deposits and a larger volume of reserves.

Related to the assumption that total tax revenues will not change is the importance of government borrowing. In LDCs in particular, the problem of borrowing must be addressed in its own right. As we saw in Part II, the reserve requirement tax and related government regulation are designed in part to provide a market for government debt at favorable interest rates. Indeed, one key attribute of the system of controlled interest rates is that it favors government borrowing at attractive rates by reducing the attractiveness of substitute assets.

Because revenues must be raised, and the scope of tax policy is limited to allocating the "fixed" burden, it is misleading to attribute the full tax wedge, and its effects, to taxes. It would be more accurate to attribute the full wedge to government expenditures, putting the analytical focus of the matter where it belongs. To limit the issue to that of taxes requires finding a standard of comparison in that the overall tax burden is more appropriately raised. One simple standard of comparison is that of the average tax rate on the economy as a whole; for example, the ratio of taxes to GDP. Such a standard is one in which all activities pay an equal, flat rate tax.

The results of such a comparison can be enlightening. Though it is only a rough measure of the METR, over 40 percent of the intermediation spread in the Philippines was a consequence of tax policy. In contrast, tax revenues are somewhat over 10 percent

of GNP.²⁴ Allowing for the fact that GNP includes capital consumption that should not be taxed, an average tax rate of less than 20 percent on net national income might be a rough standard for comparison. This suggests that intermediaries may be "overtaxed" by about a factor of 2 there. It should be possible to convert this number to a revenue figure, a number that would suggest the amount of tax redistribution needed to "normalize" the situation of intermediaries there.

A better, though more complicated alternative, is to specify a "realistic" tax reform. Once such a hypothetical, reformed tax system is specified, the difference in tax wedges on different activities from those that would occur in the reformed system accurately measure the effect of taxes on intermediation. To analyze the matter without this kind of refinement is misleading because it wishes away the government's budget.

How does one develop a "reformed" system for comparison? The theory of public finance offers a wide range of tax structures that could improve on existing systems and some ordering in terms of degree of "perfection." Each of these alternative systems, however, depends upon the nature of the economy and the information available to taxing authorities. Rather than simply adopt one, it is more practical to identify a few principles of good taxation and see how these can be implemented. Implementing them gives rise to a realistic tax structure that can serve as a basis of comparison.

The most important principle is that more broadly based taxes, at equal rates, are preferable to narrower and more discriminatory taxes. Although there is a theoretical literature in economics showing that "optimal" taxes in principle involve discrimination on grounds of economic efficiency, the information required to implement such "optimal" tax schemes is virtually never available, particularly in developing countries.²⁵

In contrast, broad-based, equal rate taxes minimize both the burden falling on any individual taxpayer and the incentives to avoid or evade taxes. Not only does this improve revenue yield and lessen economic distortions, it also provides an obvious grounding in fairness. One can then modify the scheme to achieve redistributive goals, but with the recognition that the tax system may prove a very blunt instrument in this regard.

Despite this injunction in favor of broad bases and equal rates, the governments of developing countries are sharply limited in their ability to enact and administer such a system. Thus, as a practical matter, taxation must generally followed the line of least administrative resistance, a fact not unique to developing countries. Both the liquidity and the accounting standards of financial intermediaries make them ready targets for taxation (both explicit and implicit), and perhaps properly so given the administrative costs involved in raising the revenues from many other sectors. Furthermore, regulations such as reserve requirements, that are aimed at prudential ends in governing the macroeconomy and preserving the stability of the financial system, have a separate legitimacy.

The analytical issue, then, is one of attempting to ascertain what these benefits--such as administrative ease--are worth, and what are the costs. Operationally, this means asking whether the same ends could be achieved at lower cost, and whether existing requirements are not needlessly excessive. The goal of such an analysis is to determine how the burden of taxation can be shifted at the margin.

The outcome of such an analysis is a hypothetical tax reform. The reformed system provides a standard of minimum practical discrimination consistent with the

government's revenue needs, the structure of the economy, and the ease of administration. Against this standard, and the tax wedges it would engender, may be compared the actual tax wedges under the existing system. Any differences represent unwarranted and unnecessary discrimination against, or in favor of, financial intermediation.

It may be thought that such an analysis is overly elaborate. Certainly, it should be kept as simple and as focused as possible. And, at the very least, one needs to identify tax increases--and their effects--to offset any proposed tax reduction in the financial sector. In the absence of such analysis, there may be a tendency always to argue that taxes are at fault in any sector deemed critical. The result may be partial reforms with unexpectedly adverse consequences elsewhere.

IV. Policy Recommendations

To a great extent, the considerations raised in the preceding section counsel caution in making policy recommendations that rest on presumptions about the tax structure that may not be justified, or on overly simplistic analyses of the effects of tax policy. A number of analyses, following the path outlined here, would be necessary before conclusions could be drawn. Nonetheless, four policy recommendations are called for by the factors that have been identified:

1. Free entry into financial intermediation, subject to prudential concerns, ought to be encouraged to the maximum extent possible. Entry to the intermediation industry is, by and large, sharply limited and dominated by government- or quasi-government enterprises, and the disadvantages of such a structure have increasingly been documented in recent years.

The issue of entry is intimately related to tax reform. Tax incentives and disincentives only work where individuals are free to respond to them. Even if financial intermediaries are heavily taxed, this alone may not be especially costly to the economy given the current organization of this industry in many countries. Where entry is limited, heavy explicit taxation may primarily serve to reduce monopoly profits. Nor, for the same reason, would reducing their taxes encourage the expansion of financial intermediaries in such an environment.

2. Tax rates ought to be made as uniform as possible across industries and sectors. The uniformity of tax rates should be understood to incorporate those implicit taxes discussed in this paper as well as explicit taxes. Uniformity requires the

elimination of specialized and targeted tax incentives wherever feasible. In the absence of compelling evidence to the contrary, tax discrimination cannot be presumed to benefit economic development. On the contrary, unwarranted tax discrimination produces economic incentives that are unrelated to the productivity of alternative investments. It thereby inhibits economic development.

3. Controls on interest rates ought to be removed. These controls tend to subsidize borrowers at the expense of savers, and to do so without regard to the productivity of borrowers' investments. In addition, for free entry to be effective, intermediaries must be able to compete for funds. Finally, given the potentially high costs of information and transactions inherent in making loans to smaller and more risky borrowers, controls are likely to prevent investment in projects with higher development potential.

One of the reasons for such controls, as well as for excessive reserve requirements, is the tendency to subsidize government borrowing through these channels. This strategy tends to mask--for a period--the true position of the public sector accounts and the economic cost of the public sector. Removal of controls on interest rates would go some way toward making these costs evident.

4. Transactions or turnover taxes ought to be replaced by retail sales taxes on consumption (or VATs) or by increases in income tax rates. Taxes on transactions and similar "cascading" taxes discriminate arbitrarily in favor of integrated businesses, thereby discouraging business startups--including financial intermediaries and the businesses to whom they may lend.

ENDNOTES

1. These generalizations are drawn in part from Goldsmith's (1969). The Gurley-Shaw analysis is summarized in Gurley and Shaw (1960). See also Gurley and Shaw (1956) and Gurley (1957). The work of Gershenkron (1962) on the economic history of Germany also contains related insights.

2. Economic theorists in recent years have devoted increasing attention to the lending and borrowing decisions of economic agents in conditions where information is imperfect and unevenly distributed. This emphasis promises to yield new insights and possibly overturn some of the conclusions derived from older analyses in which the role of information was ignored. See, for example, Joseph E. Stiglitz (1985).

3. An interesting case study of this process and its evolution is provided for Haryana in India by Bhatt (1979).

4. See Arrow (1970), Gurley and Shaw (1960), and Davis and North (1971).

5. On the reasons for such high costs see the "Two Studies" by Hanson and de Rezende Rocha (1986) and, for an elaborate theoretical treatment, Virmani (1982).

6. See Fry (1988, pp. 292-298) for a review of the literature on these institutions.

7. See Bhatt, (1986).

8. See, for example, Samuelson and Nordhaus (1985) and Burger (1971).

9. The path-breaking studies were those of Shaw (1973) and McKinnon (1973). The term was coined by McKinnon. The most recent comprehensive survey of the topic is that by Fry (1988). A recent brief essay on liberalizing a repressed economy can be found in McKinnon and Mathieson (1981).

10. See Fry (1988), pp. 240-247.

11. Newbery and Stern (1987).

12. Hanson (1988), p. 4.

13. Hanson (op. cit.) cites the Turkish tax as a gross receipts tax on loan interest, while Fry describes it as a "transactions tax on the value of each financial transaction undertaken by a financial institution." This is one of Fry's two examples, mentioned earlier. His other is the Philippine system, which comes from Ghanem (1986).

14. Tucillo (1977) constructs some quantitative estimates of the magnitude of this implicit taxation of intermediaries in the U.S.

15. Bank of Zambia (1985)

16. For a broad discussion of interest rate policies see Hanson and Neal (1986).

17. Ghanem (1986) *op. cit.*

18. Banco Central de Costa Rica (1985)

19. See also Fry (1988) pp. 273-275 for some examples of reserve requirement ratios from other developing countries.

20. See, for example, Marsden (1983) and OECD (1987), chapter 10, as well as IBRD (1988).

21. Analysis of the tax wedge and of the marginal effective tax rate on investment associated with it was pioneered by Mervyn King, and the method generally used was developed and presented in King and Fullerton (1984). The unpublished paper from the 1987 International Conference on the Cost of Capital at the Kennedy School of Government, Harvard University presents a recent selection of academic work in this area from many countries.

22. See also de Rezende Rocha (1986).

23. The following discussion of financial market organization rests heavily on the discussion in Fry (1988), especially Part III.

24. International Monetary Fund (1987)

25. See Newbery and Stern (1987).

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