

APR 11 1985

FINANCIAL DEREGULATION IN THE UNITED STATES AND IN DEVELOPING COUNTRIES

Paper presented by

Henry C. Wallich

Member, Board of Governors of the Federal Reserve System
and

Thomas C. Glaessner

Economist, Board of Governors of the Federal Reserve System

to the

III International Conference on the
Financial Development of Latin America and the Caribbean

Caracas, Venezuela

February 29 - March 3, 1985

Financial deregulation allows financial activity to take place in accordance with market forces and often occurs in response to such forces. For an industrialized country like the United States, deregulation is generally thought to be desirable, although elimination of all regulations is not conceivable and many changes in regulations may have some adverse side effects. For developing countries, the desirability, extent, and pace of financial deregulation may be limited by the openness of the economy, the financial structure prevailing in a particular country, and existing macroeconomic policy.

Among the most frequently cited purposes of financial regulation are to influence resource allocation, to maintain economic stability, and to promote the safety and soundness of financial institutions. Deregulation does not imply that these purposes are unimportant. But it is often found that they can be better achieved with less regulation (particularly in view of the fact that regulations frequently have adverse side effects) and that the market is often able to circumvent most regulations. Hence the presumption that in industrialized countries deregulation has often proved beneficial.

In this paper, financial regulation and deregulation will be viewed broadly to encompass both the domestic and the external financial sector--the latter reflecting a nation's current and capital account transactions with the rest of the world. In this context, financial deregulation will usually refer to policies that place more emphasis on market forces to set prices for domestic credit or foreign exchange and to allocate supplies of credit or foreign exchange. Regulations applied to individual financial institutions as a means of helping ensure safety and soundness or to curb excessive concentration of financial and economic power, must be distinguished from those that substitute for market allocations.

The paper is organized as follows: sections I - II present a broad overview of various aspects of domestic deregulation of credit markets in the United States and developing countries, while sections III and IV discuss different aspects of regulations aimed at preventing excessive concentration of economic power and preserving the safety and soundness of financial institutions in the United States and developing countries. Finally, the last two sections of the paper focus on external financial regulation and deregulation. The effects of allocating foreign exchange through price (e.g., choice of exchange rate regime) and quantitative controls (e.g., exchange controls) in the United States and developing countries are examined.

I. Interest Rates

United States

Interest rates have been largely deregulated, through progressive though not yet complete elimination of the interest rate ceilings on bank deposits (the Federal Reserve's Regulation Q) and moderation or elimination of state and local government usury ceilings. The prohibition of interest on demand deposits remains but is de facto circumvented because banks can offer services free of charge in lieu of paying interest on deposits.

The original purpose of regulating interest rates on bank deposits, which was introduced in the 1930s, was to avoid "excessive" and "dangerous" competition for deposits, provide cheap credit principally for homeowners, hold down the level of interest rates generally, and work for cyclical stabilization. Some of these objectives were of questionable merit, and not all of them were achieved. For instance, subsequent experience and studies seem to show that "excessive and dangerous" competition for deposits was not an important cause of the bank failures of the 1930's. Cheap credit for homeowners probably was achieved at times, but at the expense of occasional periods of virtual unavailability of credit, due to disintermediation from rate-restricted mortgage lending institutions when interest rates rose above the controlled rate.

Whether the level of interest rates was significantly held down by deposit interest-rate ceilings, except for these particular deposits, is also debatable. Moreover, during periods when an interest-restraining effect may have been present, such as during the late 1960s, it may not have been consistent with a noninflationary monetary policy. Savers, furthermore, frequently received negative real interest rates during periods of inflation, particularly if the taxability of the inflation premium contained in the interest rate is taken into account.

Benefits for cyclical stabilization may have been achieved, in a manner perhaps not intended, when funds flowed out of mortgage lending institutions during periods of high interest rates and strong economic activity resulting in a sharp decline in housing construction. The unintendedly severe impact upon housing in effect provided the central bank with a new monetary "tool." However, it should be noted that even after the deregulation of interest rates domestically, the housing sector continues to be cyclically sensitive, because it is particularly credit intensive.

Eliminating interest-rate ceilings, finally, proved to be a politically difficult process, in light of the fact that it implied redistribution of income. However, deregulation of interest rates had the incidental political advantage of reducing the tensions associated with the administration of the ceilings.

Developing Countries

The extent and manner of implementing interest rate controls in developing countries varies widely.^{1/} In many developing countries implementation of interest rate controls on deposit and loan rates has often reflected the desire to provide cheap credit to homeowners as in the United States and to provide inexpensive credit to other targeted sectors of the economy, such as the export sector or certain public sector enterprises. Moreover, regulated rates for bank lending have often given rise to controls on deposit rates offered by financial institutions in many developing countries.

However, such controls in conjunction with the high inflation rates plaguing many developing countries have led to financial innovations, some similar to the innovations that occurred in the United States during the period of high inflation in the 1970s and others that are more unique to developing countries generally. In many Latin American countries, these innovations have sometimes involved the creation and growth of new financial institutions, such as investment clubs and different types of mutual funds and finance companies that offer liquid high yielding deposits, similar in nature to U.S. money market mutual funds. Finance companies have also become prominent in such East

^{1/} In some countries, controls are imposed on the nominal interest rates paid on deposits or on loan rates. In others, deposits or loans pay a fixed nominal interest rate plus an adjustment for the erosion in the real value of the initial amount of the deposit or loan due to inflation through the use of indexation schemes.

Asian countries as Thailand, Singapore, and the Philippines since these new institutions are not subject to the interest rate ceilings placed on commercial bank deposits. In those developing countries where legal institutions have not developed to provide deposits or loans at free market rates, illegal markets have developed. For example, illegal intercorporate borrowing and the provision of liquid interest bearing deposits by private corporations has become quite common in many Latin American countries. In addition, illegal currency substitution has also resulted. Such activities, to the extent that they involve resource expenditures by participants, have increased the resource costs associated with the non-price rationing of domestic credit. Finally, the increased use and development of various means for firms (and even households) to economize on holdings of cash balances, through the increased use of repurchase contracts and other types of contractual arrangements, has also been prevalent in many developing countries as in the United States during the 1970s. These financial innovations have helped contribute to the instability in the demand for money present in many developing countries that has made the implementation of monetary policy more difficult.

In many developing countries where real interest rates have become negative, given interest rate controls and high domestic inflation rates, investors have circumvented such controls by transferring capital abroad and domestic capital formation has been less than it might have been otherwise. Under these conditions, governments in developing countries have often been forced to adopt exchange or capital controls. To counteract these problems, developing country governments have introduced financial innovations aimed, in

part, at reducing capital flight, such as the issuance of indexed assets and the offering of dollar accounts.^{2/}

Finally, domestic interest rate controls often result in "financial repression," that is, growth of the real size of the credit system that has lagged behind the rate of growth of the economy.^{3/} This has often led to either excessive central bank financing (and money creation) or increased foreign borrowing. It should be observed, however, that as interest rate controls become binding, other methods to allocate savings flows may be created. Alternatively, existing unregulated institutions may provide credit so that the definition of the credit market as the legal market would appear to be important in making this argument.

Provision of credit by the government at controlled nominal rates also affects the market structure of the non-financial corporate sector, particularly in those developing countries where organized debt and equity markets do not exist. In some countries, large industrial groups expanded into the financial area to assure access to scarce subsidized credit. If such industrial/financial groups finance themselves with government subsidized loans, incentives can exist for such firms to leverage themselves excessively, a phenomenon that has been common in several Latin American countries.^{4/}

^{2/} Introduction of these types of financial assets has not guaranteed that capital flight will not ensue as the recent experiences of Mexico suggests. What is important is the extent to which investors have confidence that the government will not abrogate its contracts with domestic investors. Moreover, the introduction of indexed government debt and dollar accounts has made the implementation of macroeconomic stabilization policies more difficult in many developing countries. See Bruno and Fischer [1984], Fischer [1984A], [1984B] Dornbusch and Adroualdo Moura de Silva [1984], or Ortiz [1983].

^{3/} This argument can be found in Shaw [1973] or McKinnon [1981].

^{4/} This argument will only tend to hold to the extent that the government is not able to assess the credit risk of such a loan as well as the private market. Moreover, in some countries, such groups arbitrage the subsidized government credit by on-lending it to other institutions at higher interest rates.

Interest-rate regulation in a number of developing countries is supplemented by government provision of a substantial proportion of total credit at preferential rates. Typically such credit has been provided directly through central bank lending or by publicly run commercial and development banks. In some instances governments have required that financial institutions lend a certain proportion of total liabilities to a particular sector of the economy at concessionary rates. Moreover, in developing countries where the public sector deficit is large and inflation rates are high, governments frequently adopt policies that are designed to increase government revenue by broadening the inflation tax base. For example, reserve requirements are frequently maintained at high levels and commercial banks and other financial institutions are often forced to hold government securities. Such policies increase the spread between the rate on bank deposits and on those loan rates that are freely determined and result in further segmentation of domestic capital markets. Under these conditions the capital market may not be large enough or flexible enough to permit establishment of a competitive level of interest rates. Perhaps more importantly, deregulation of deposit and loan rates will be politically difficult.

II. Credit Allocation

United States:

Deregulation of interest rates in the United States has caused credit to be allocated increasingly through the price mechanism. Numerous government programs involving credit allocation nevertheless continue to operate. Tax deductibility of interest helps particularly homeowners and consumer borrowers. The insurance and guarantee programs of the government for housing, and the Farm Credit Administration serving farmers, are designed to move credit resources toward those areas. The effect, while surely not negligible, may nevertheless be a good deal less than the total volume of credit

provided under these programs. As credit supplies increase and interest rates are depressed relatively in the favored areas, private-sector funds that otherwise would have gone into these areas may be deployed elsewhere. Particularly visible cases of governmental credit allocation have been the support actions for troubled firms like Lockheed and Chrysler. The broadening of thrift institutions' lending powers, to include consumer and commercial loans, on the other hand, is an example of diminishing allocation by government.

The Federal Reserve has frequently been urged to administer its credit control powers to favor and particularly to limit certain types of credit that the proponents regard as particularly productive or unproductive or socially desirable by a particular group. Aside from the legal and technical difficulties of such proposals, a more fundamental objection is that "productive" and "unproductive" types of credit are difficult to distinguish. This point applies particularly to recent criticism of merger financing. The criticism overlooks the point that improvements in the pricing of corporate assets and changes in corporate management may well be very productive. It also overlooks the fact that the credit employed in the purchase of existing assets does not absorb credit permanently, since the seller of the assets will presumably employ the funds somewhere in the financial system. Finally, control of particular credit operations probably would be discriminatory because it would not significantly affect large borrowers with ready access to international credit.

Developing Countries

As indicated in section I there has been a tendency in developing countries for a substantial amount of credit to be allocated by the government to particular sectors. This has often been done either directly by public development banks, the central bank, and by government-run commercial banks,

or indirectly through government imposed portfolio and loan pricing restrictions on private commercial banks and other financial institutions. Thus, financial institutions have tended to function more as retailers of government funds than as private intermediaries. These methods of allocating credit have made it particularly difficult to assess the exact size of the subsidy being provided by the government given the problems encountered in calculating a proper shadow price for different types of credit. Perhaps more importantly, current methods of allocating domestic credit in many developing countries have relied on allocation rules that have often targeted a certain proportion of total credit to certain public versus private sector enterprises or to certain sectors and regions within the economy based on different non-price rationing schemes.

The lack of adequate equity and long term bond markets in the initial stages of development has often led to government development of intermediaries (e.g., special development banks) that have often financed corporations, and long-term capital-intensive development projects deemed to have a high rate of "social" return. In many instances this has led to the presence of an inverted yield curve since rates on such long-term credit are not adjusted in line with short-term unregulated interest rates. Thus, the development of long-term bond and equity markets has been discouraged, and private intermediaries have often not engaged in long-term lending.

In many developing countries access to credit by different sectors of the economy has become highly uneven, particularly when macroeconomic policies have required a contraction in available credit. Credit to the private sector often has been "crowded out" by large government deficits combined with a restrained monetary policy. This would appear to suggest, in addition to budget reform, a need for a general improvement in the credit system that may often involve greater use of price rationing of credit by public and private

institutions rather than the use of quotas, ceilings, and other non-price rationing schemes.

Deregulating interest rates and improving the credit system of developing countries may imply that significantly wider swings in market interest rates would result in the course of conducting stabilization policy.^{5/} This would be the case if allocating credit through the price mechanism alters the responsiveness of spending to open-market interest rates. To the extent that under a system of controlled interest rates economic agents make spending decisions that reflect their expectations about the shadow price of credit, given previous periods when credit was rationed, the response of spending to open market interest rates may not be as significant. Unlike the United States, where mainly the housing sector appears to have been affected by such considerations, developing countries allocate a large portion of credit at non-market prices to many sectors of the economy.^{6/} Thus, the response of spending to open market interest rates may be altered quite significantly as more credit is allocated through the price mechanism. This reasoning would also tend to imply that solely deregulating certain interest rates would not necessarily result in a major impact unless the deregulation applied to a sector that accounted for a large proportion of total spending.

Finally, in many developing countries, policies designed to improve the domestic credit system cannot be assessed independently of policies aimed at affecting the price and allocation of foreign exchange or of other government policies that affect commodity trade, control of factor movements and flows of financial claims. For example, in developing countries characterized

^{5/} See Albert M. Wojnilower, "The Central Role of Credit Crunches in Recent Financial History," Brookings Papers on Economic Activity 2, 1980.

^{6/} See Simpson and Parkinson [1984] for a discussion of these issues in the U.S. economy.

by small open domestic economies, so-called domestic financial "liberalization"^{7/} has sometimes led initially to large capital inflows due to the increase in real interest rates paid on domestic assets and to an eventual expansion in the domestic money supply depending on the exchange rate regime. Often other measures such as quantitative exchange controls have been adopted to provide some degree of independence for monetary policy, but with attendant distortionary affects on the allocation of foreign exchange. Thus, the policy to be pursued with respect to a particular distortion (e.g., domestic interest rate controls) must also take into account other existing distortions. In particular, it would be necessary to assess the set of conditions under which it would be possible to allocate both domestic credit and foreign exchange according to the price mechanism.^{8/}

III. Specialization of Financial Institutions

United States:

A large economy and a high degree of development makes financial specialization possible, although not necessary. Until recently, and to a large extent even today, the functions of finance in the United States have been highly specialized. Commercial banks have not been allowed to enter the securities business except in a very limited way, thrift institutions have had to specialize in housing and more recently consumer credit, investment banking firms have been excluded from commercial banking.

The present trend is predominantly away from specialization, both through enacted and proposed legal changes and through the tendency of a highly aggressive and competitive financial system to exploit regulatory loopholes in

^{7/} See Matheson [1984], Krueger [1978], [1981], McKinnon [1981], [1984], or Edwards [1984] for a more detailed discussion of the issues associated with domestic and external financial liberalization, and section VI of this paper.

^{8/} Issues associated with the time and manner in which to do this are taken up in section VI.

order to overcome legally imposed specialization. Financial institutions' search for growth and profitability is a driving force. The potential benefits of such developments are more competition and improved access to financial services for consumers and business. From the point of view of the safety and soundness of the financial system, however, it is important that new activities do not lead to increased risks but, rather, to better risk diversification and greater stability. Other concerns associated with diminishing specialization are the danger of conflicts of interest and excessive concentration of resources.

Developing Countries

There are advantages and disadvantages in combining commercial banking and securities activities in so-called universal banks. The advantages frequently cited are those of scale economies--particularly better use of managerial talent--and risk diversification. Important negative aspects--in addition to possibly greater concentration of economic power--are the increased interest rate risk to the universal bank associated with underwriting securities and danger of conflicts of interest such as when a universal bank makes loans to corporations for which it has served as an underwriter in situations where the corporation is experiencing severe financial distress.^{9/}

In small developing countries in which securities markets have not yet developed and where entrepreneurial talent may be scarce, there is likely to be far less scope for specialization of commercial and securities banking. Thus, the benefits due to scale economies present from combining commercial and securities banking, may offset the problems frequently associated with com-

^{9/} This argument may incorrectly presume that the universal bank either has or thinks it has better information about its corporate clients condition than the private market. If this were not the case, it would be difficult to explain such behavior by the bank. In many countries, however, the bank may have better information to the extent that it has an ownership interest in the corporation or because there may be interlocking directors.

binning these operations. Combining these activities in the early stages of development could also be useful to the extent that the supply of credit to different sectors will be less uneven if not provided by specialized institutions often operating in segmented markets. Moreover, fostering entrepreneurial talent may encourage the creation of specialized securities firms as long-term securities markets develop.

In larger developing countries that contain more well-developed securities markets, where significant conglomeration in the financial sector already exists, and where regulation of the relationship between financial and non-financial firms is weak, the case for combining commercial and securities banking is less strong. In several Latin American countries, large financial or financial/industrial groups presently exist. Allowing such groups to engage in securities underwriting could potentially worsen an already serious ownership concentration problem and perhaps retard further development of securities markets.^{10/}

IV. Safety and Soundness of Financial Institutions

United States:

Externalities of bank failures can be larger than those of most other firms. The market, therefore, may tend to accept risks in excess of what is socially optimal, unless regulatory techniques succeed in internalizing social costs of failure. Regulation to ensure safety and soundness, therefore, need not be at odds with the principles embodied in deregulation. Deregulation

^{10/} A recent study conducted by the International Finance Corporation (see David Gill [1979]) suggests that the presence of universal banks has not led to more well developed and efficient long term securities markets than would have otherwise existed if there had been a separation of commercial and securities banking. In most instances, the development or retardation of securities markets depended critically upon such factors as a tradition of securities financing, active government encouragement of securities markets, high and variable inflation, political instability, and competing government provision of long-term credit.

should not lead to reduced safety and soundness of financial institutions, but on the contrary, should be accompanied by action to enhance safety and soundness. This has been true in the United States where deregulation of domestic credit markets has occurred in an environment of increased financial risk. Such increased risks have occurred because of inflation and disinflation and the weak condition of particular loans made by commercial banks to developing countries, to the energy business, to real estate, and to agriculture. In the United States, some of these problems are being dealt with by mandatory increases in bank capital and by mandatory and voluntary provisioning against troubled loans. While increases in provisioning have been substantial, the main regulatory emphasis has been placed on improvements in capital ratios. In their results on the strength of financial institutions, the effects of the two techniques are the same, except for possible tax consequences and the effects of new capital issues. Deposit insurance, which in the United States is comprehensive although not complete, is being reexamined both in order to enhance safety and to minimize moral hazard, i.e., the misuse of insurance to support excessive risk taking. The process of bank examination and supervision is also being strengthened, a move both consistent with and made necessary by progressive deregulation.

The financial system is backstopped by the Federal Reserve's powers as a lender of last resort. The Federal Reserve's ability to perform this role is enhanced by two circumstances not always found in other countries: First, the Federal Reserve has a large and highly liquid portfolio of government securities from which it can make sales to the nonbank public if it wished to neutralize expansionary effects of discount window loans made to particular financial institutions. A second consideration, which would only be important to the extent that binding exchange controls were in existence,

something that is presently not the case, is that American banks have very few net liabilities in currencies other than the dollar, i.e., the currency the Federal Reserve can create.

Developing Countries

Deregulation of banking in developing countries, as in the United States, requires coordinated government actions to constrain risks. In particular, firm bank supervision and frequent and detailed reporting by financial conglomerates of their consolidated operations to regulatory authorities, are important safeguards.

Maintenance of bank capital is also important. In many developing countries, particularly those in Latin America and in some East Asian countries that have experienced high inflation, bank capital has at times been eroded in spite of indexation arrangements aimed at preserving the real value of bank capital. In addition, the problems encountered in proper inflation-accounting make evaluation and enforcement of capital adequacy standards in many developing countries difficult.

Although formal deposit insurance is not nearly as widespread in developing countries as in industrialized countries, evidence is present that de facto public guarantees have been widely provided to depositors.^{11/} Moreover bankruptcy laws and the equivalent of U.S. Chapter 11 filings in developing countries have generally been designed in ways that have tended to favor financial or non-financial institutions (particularly in countries experiencing high inflation rates). Under these conditions, deregulation of the domestic financial sector through the decontrol of deposit and loan rates in

^{11/} See for example, Carlos F. Diaz-Alejandro [1984A] [1984B], for a discussion [1984A] [1984B], for a discussion of these issues and Frank Veneroso [1984], "Financial Instability in Developing Countries, Summary."

conjunction with contractionary macroeconomic stabilization policies and large exchange rate adjustments (e.g., maxi-devaluations) can set up incentives for non-financial firms to borrow at extremely high real interest rates. Moreover, creditors may be willing to grant credit at such rates because they may rationally anticipate that the costs of engaging in such behavior will be small (i.e., the moral hazard problem). A high degree of concentration of the financial sector may also be present. Often there has been a need for government intervention in the banking system on a large scale, as occurred in Mexico, Chile, Argentina, and the Philippines. Thus, adequate supervision and a legal framework that creates incentives for prudent microeconomic financial behavior are important pre-conditions to deregulation of the domestic financial sector.

Lender-of-last-resort assistance in developing countries raises difficult issues for several reasons. First, commercial banks and other financial institutions often tend to have net liabilities in currencies other than in the home currency, and foreign exchange controls have often been binding in these countries. Therefore, central banks have sometimes had to provide lender-of-last-resort assistance in dollars to commercial banks whose offshore branches have otherwise been unable to obtain dollars to repay short-term credit lines not renewed by foreign commercial banks.^{12/} Such repayment problems have arisen, for when offshore branches of commercial banks in developing countries borrowed in the short-term euro-interbank market and made long-term loans domestically. Inadequate holdings of dollars have limited the lender-of-last-resort capabilities of such central banks.

^{12/} In the case of many developing countries such problems have not arisen if foreign commercial banks have been willing to maintain interbank credit lines at certain pre-specified levels as has been the case under the rescheduling arrangements recently adopted in many Latin American countries. The problem referred to above occurred during 1982 and early 1983 for some Latin American countries.

Second, to the extent that government securities markets are not well developed and foreign exchange reserves are low, it is often difficult for the monetary authorities to carry out sterilized lender-of-last-resort operations. However, sterilization may not be necessary in times of generalized "bank runs" when a lender-of-last-resort should also provide temporary liquidity.

V. Exchange Rates

United States:

The exchange rate is not an objective of U.S. policy, although in recent Federal Open Market Committee decisions to implement discount-rate changes the strength of the dollar has been mentioned as a factor. U.S. monetary policy naturally must take account of the international value of the dollar, and can use it as an information variable in assessing the stance of policy. But giving the exchange rate primary weight in U.S. monetary policy risks abandoning money-supply targets and in present circumstances reigniting inflation.

Currently, the interrelation of interest rates, exchange rates, and the budget deficit in the United States is generally recognized. The budget deficit tends to raise real interest rates (particularly if not financed through money creation)^{13/} and the real exchange rate simultaneously in order to raise savings rates generally and shift foreign savings to the United States. Such an analysis makes it evident that the recent behavior of fiscal policy rather than that of monetary policy is presently the most important factor affecting the real exchange rate.

^{13/} Recently some (see Engel and Frankel [1984]) have argued that the expectation of monetization of the budget deficit by economic agents could lead to higher nominal interest rates also.

A floating exchange rate system seems to be the only possible exchange rate regime today for the United States. Sterilized exchange market intervention has been shown to have little lasting effect.^{14/} Unsterilized intervention can have strong effects on the exchange rate through its impact on the money supply. Pegging the dollar to any other currency or asset seems infeasible for the dollar, although it is quite possible for many other currencies to peg to the dollar or some other major currency.

Developing Countries

Developing countries, unlike the United States, have in general not relied on the price mechanism to allocate foreign exchange. In many developing countries, efforts are often made to fix domestic interest rates and through various credit allocation schemes (as noted in sections I and II above) still maintain an independent monetary policy. This almost invariably leads to a situation where it becomes necessary to adopt exchange rate regimes and often attendant exchange controls systems that result in some independence for monetary policy.^{15/}

Developing countries have adopted a variety of different exchange rate regimes. In addition to unified floating or fixed exchange rate regimes, some developing countries have adopted a crawling official exchange rate. In many developing countries (particularly in Latin America), there has been a striking reemergence of multiple exchange rate regimes. A recent IMF staff report indicates that in 1983, 36 percent of developing countries had multiple exchange rate systems versus only 27 percent in 1975.

^{14/} See for example Rogoff [1984] for a summary of the effects of sterilized intervention on exchange rates.

^{15/} Such considerations have not been the only or even the prime reason for the adoption of the many different exchange rate regimes in many developing countries as is indicated below.

At least three types of multiple exchange rate regimes have been common. In some countries, various fixed official exchange rates are applied to specified current or capital account transactions. Another type of multiple exchange rate system involves the use of a "dual rate" system where a legal or illegal but open free market rate operates (often for capital account transactions) along with an official rate usually applied to current account transactions. One argument often advanced for the use of such a regime rests on the benefits associated with reducing excessive fluctuations of the exchange rate for current account transactions that would otherwise be induced by speculative capital movements. A third type of multiple exchange rate regime involves the use of ad valorem or specific taxes or bonuses applied to specific foreign exchange transactions. Finally, many multiple exchange rate regimes in developing countries simultaneously exhibit characteristics present in the different types of regimes noted above, and some economies have adopted competitive auction systems for rationing foreign exchange (e.g., Jamaica). In many countries, the "official" rate in these regimes operates as a subsidy to nationalized industries or other sectors of the economy in a similar manner to the domestic credit schemes in such countries.

In the last few years, multiple exchange rate regimes have been introduced as tax/subsidy schemes in order to affect resource allocation (e.g., promote nontraditional exports), as a method to obtain revenue and as a response to volatile or large one way capital flows that have tended to erode the government's tax base. Finally, multiple rate regimes have arisen because of debt servicing difficulties through the provision of preferential rates of exchange offered to public and private sector borrowers as has been the case in Venezuela, Chile, and Mexico.^{16/}

^{16/} This list of reasons is not exhaustive, see Dornbush [1984] for a more detailed treatment.

The International Monetary Fund and the World Bank have generally encouraged member countries to unify their exchange rate regimes.^{17/} Under Fund Articles, multiple currency practices involving current account transactions and short term trade-related capital account transactions require prior Fund approval. However, at times multiple exchange rate systems (particularly dual exchange rates) have been tolerated as a transition to a unified exchange rate system.

The diversity of multiple exchange rate regimes in use by many developing countries, the difficulties encountered in second-best welfare analysis,^{18/} and the varying reasons for the adoption of such regimes, make it difficult to make unambiguous generalizations about the advantages and disadvantages of such regimes, particularly over the short-term. Over the long-term, as documented by several studies, the distortionary effects on the allocation of resources, of such regimes suggests the need to unify the exchange rate. However, as in the case of controls on interest rates once such regimes are adopted, governments frequently do not want to give up this policy instrument and it can become politically difficult to deregulate given the effects on income redistribution.

Although multiple exchange rate regimes are tantamount to an implicit set of taxes and subsidies, the actual economic cost of these schemes is often difficult to measure. This is due to the fact that the magnitude of the subsidy or tax can only be measured relative to some "appropriate" exchange rate level or some calculated shadow price that multiple rate systems themselves often render increasingly unobservable. Furthermore, as in the case of taxes and subsidies, there is a difficult problem of incidence. That is, market

^{17/} See Anne Krueger [1983], or Bhagwati [1978].

^{18/} See Michael Mussa [1983], for a discussion of such issues.

forces rather than explicit policy will determine which sectors are ultimately going to benefit from disparities of treatment. For purposes of subsidization of exports or raising of tax revenue a more direct approach is through the fiscal system (i.e., the budget) of the country through, for example, explicit imposition of a tax on trade or other transactions.

Finally, in the short-run, one advantage of multiple exchange rate regimes that has been pointed out by several authors is that certain transitory macroeconomic shocks can be more easily absorbed. Alternatively, if the external shock is permanent, multiple rate regimes will tend to result in a greater misallocation of resources than would have occurred in the absence of such a system, since economic agents will not adjust their patterns of production and consumption appropriately in response to the permanent change in relative prices.^{19/} However, the fact that transitory and permanent shocks may be very difficult for both the government and economic agents to distinguish, makes it difficult to apply such theoretical results to policy in this area.

Two other considerations of importance are raised by a developing country's choice of exchange rate regime. First, what method of exchange rate adjustment should countries that have official rates adopt? Second, what indicators should a developing country use in trying to set the exchange rate so that it will be competitive? To some extent, similar considerations would also arise in administering domestic interest rate controls on loans and deposits within an economy.

Countries that do not have unified floating exchange rates have often fixed their exchange rate to another currency (e.g., the dollar), to a basket

^{19/} See Dornbush [1984] or Flood and Marion [1982].

of currencies, or they have used a rule whereby they have depreciated their currency in line with domestic price inflation. None of these rules for adjusting the exchange rate guarantee that the administered rate will be "realistic" or that the real exchange rate will necessarily be competitive. However, the last alternative, as applied in Brazil for example, has tended to result in a real depreciation of the currency in excess of the amount required to maintain the real value of the cruzeiro at the level prevailing after the maxi-devaluation of February 1983. This policy contributed to the rapid turnaround in Brazil's current account and associated accumulation of international reserves. It also contributed to a somewhat uneven external and internal adjustment by exacerbating domestic inflation, given the present government's inability or unwillingness to sterilize the large capital inflows.^{20/} By contrast, in many developing countries, severe balance of payments difficulties have arisen due to the maintenance of exchange rate adjustment schemes that have often resulted in large real appreciations of the exchange rate under conditions of high inflation. In such situations it is important to encourage expenditure switching policies through an appropriate depreciation of the real exchange rate.

As in domestic credit markets where it may be very difficult for the government to determine how ceilings on particular loans or deposit rates should be adjusted in light of high inflation rates, the choice of what indicator a developing country should use in order to determine how the

^{20/} In many developing countries, the argument is frequently made that sterilization of capital inflows is not possible because of undeveloped securities markets or because of potential liquidity and solvency problems for financial institutions. It could be argued that a strategy of maximizing international reserve inflows was quite rational in light of the desire to obtain a multi-year rescheduling of bank debt, that in turn, required that Brazil not request new term loans from bank lenders in 1985.

exchange rate should be adjusted is also complex. In some countries where legal or illegal free parallel markets function along with an official market, governments can sometimes use the rate present in the parallel market (or the existing premium) as an indicator of the "realism" of the official rate. The usefulness of the parallel market as an indicator will also depend upon the size of the market and on the types of transactions that take place in the market. In some developing countries, the black market rate primarily reflects transactions involving smuggling and the market is very thin so that the parallel rate may not be a good indicator of the equilibrium exchange rate. Development of reasonable indicators of the "competitiveness" of a particular exchange rate (as in the case of domestic interest rates) must also take account of the numerous commercial policies (e.g., import licensing or export tax credits), and domestic credit policies (e.g., credit subsidies to exporters), present in developing countries.

VI. Exchange Controls

United States:

Exchange control is virtually nonexistent in the United States today. It has been tried in the past in such forms as the interest equalization tax, which was eliminated in 1974, and voluntary foreign credit controls, eliminated in January 1974.^{21/} Such controls have been difficult to implement in the United States, because the complexity and worldwide ramifications of dollar transactions, including in the Eurodollar markets, have made enforcement virtually impossible.

^{21/} To the extent that exchange controls are defined broadly to include all quantitative restrictions on capital and current account transactions excluding limitations on inward and outward direct investment flows the present system of eurocurrency reserve requirements present in the United States may qualify as a form of exchange control, when such reserve requirements are binding.

Developing Countries:

Many of the different exchange rate regimes (e.g., multiple exchange rates) present in developing countries require that the government have a system of foreign exchange controls in place. Thus, issues similar to those discussed in the context of domestic credit allocation, are raised about whether such schemes are the most efficient and administratively least burdensome means of allocating foreign exchange.

The International Monetary Fund has generally discouraged the use of stringent exchange-controls systems for current-account transactions and short-term trade-related capital transactions, although not for other capital-account transactions.^{22/} It has sometimes made elimination of current-account controls a performance criterion in adjustment programs. Intensified use of such controls in the course of an IMF stabilization program is treated as a violation of the program. It must be borne in mind, of course, that many types of current-account transactions, especially trade transactions, can be controlled by devices other than the control of availability of foreign exchange, for instance, through quotas, tariffs, and import licenses. These are not treated as the equivalent of current-account exchange controls under IMF programs. Rather, the GATT not the International Monetary Fund has had jurisdiction over such quantitative trade restrictions. However, in some instances IMF programs have involved the explicit removal of quantitative trade restrictions. Generally, current account exchange controls may frequently serve the purpose of controlling invisibles such as travel or other non-trade current account transactions.

^{22/} Under Article VII section 3, members of the IMF do have the right to exercise such controls as are necessary to regulate international capital movements, however, no member may "exercise these controls in a manner which will restrict payments for current transactions or which will unduly delay transfers of funds in settlement of commitments." Thus, exchange controls on capital transactions that meet the conditions indicated in Article VII section 3 can be implemented.

Studies conducted by the IMF staff and by others others^{23/} indicate that controls on foreign exchange allocation (like those on domestic credit allocation) have often led over the long term to excessive inventory holdings by firms, to a retardation of long term growth and to an additional deadweight loss associated with the resources expended in circumventing such controls.^{24/} Moreover, care must be taken in adopting various types of foreign exchange controls since both governments and interest groups within a country will often have strong incentives not to remove such controls once they are in place. Furthermore, when such schemes are adopted, questions arise concerning what second-best policies, e.g., competitive-auctioning scheme versus nonprice-rationing schemes, should be adopted in order to ration foreign exchange.^{25/}

The above considerations would seem to suggest that exchange controls should generally not be used as a policy instrument. However, there may be situations in which such controls can be beneficial. The circumstances under which to use exchange controls, the timing of when to impose such controls, and the extent or class of transactions to control present policy makers and economists with technical problems that have only recently started to be addressed in the context of short-run dynamic macroeconomic models.^{26/}

An important lesson learned from these theoretical models and perhaps more from the experience of many developing countries, is the fact that economic agents' expectations and how they are formed, will have important implications

^{23/} See Bhagwati [1978] for a detailed study of the impact of exchange control regimes in the case of several different developing countries.

^{24/} Questions have been raised about the effectiveness of exchange controls in developing countries. However, although empirical tests have been performed looking at the extent of openness of an economy (see Edwards and Mchan [1984] explicit tests of the effectiveness of various forms of exchange controls have not been performed.

^{25/} See Anne Sibert [1984] where the nature of the competitive auctioning scheme used briefly in Jamaica is discussed.

^{26/} See Bruno [1983], Obstfeld [1984], Krueger [1981], and Mathieson [1984], [1981].

in providing answers to such questions. So will the interaction between expectations and changes in government policies. Moreover, the extent to which changes in government policies or actions are perceived as temporary or permanent will be important (as in the case of the choice of exchange-rate regime) in affecting the desirability of controls.

Exchange controls also lend themselves to the control of capital movements. Of course, there are other means of regulating inward and outward capital movements, especially where private investment projects may require governmental authorization. The dividing line between exchange controls and other forms of licensing relative to a given transaction may become blurred in these circumstances. Control over capital-account transactions is allowed by the IMF Articles of Agreement, and a country can be regarded as an Article VIII country (fully convertible) when controls of this kind are in place. For example, Denmark is regarded as an Article VIII country in spite of the fact that it maintains controls over some capital-account transactions.

Large capital movements, inward or outward, can in certain circumstances become seriously disruptive for developing countries.^{27/} If the country employs a fixed exchange rate system, large inflows require absorption into reserves and creation of substantial bank reserves and an increase in the money supply. Sterilization of such an inflow is often difficult because of the inadequate development and absorptive capacity of financial markets. Moreover, aggressive efforts at sterilization may conceivably drive interest rates

^{27/} Interesting questions arise as to why capital movements have been so volatile both in and out of developing countries. The work of Krugman [1979] and Flood and Garber [1984] attempt to explain such capital movements as a rational response by economic agents to their expectations regarding the sustainability of government policies.

up, a perverse phenomenon in the face of capital inflows.^{28/} Arguments regarding the inability to sterilize international reserve inflows may also reflect the symptoms of more severe problems in the domestic banking sector or the desire to finance domestic budget deficits through money creation and the inflation tax.

If the country employs a floating exchange rate, large capital inflows need not affect bank reserves and the money supply as long as the central bank does not intervene by purchasing foreign exchange. But the nominal and real exchange rate may be driven up making the country's exports less competitive and encouraging excessive imports.

With respect to capital outflows, similar considerations apply with the opposite sign. Under a fixed-exchange rate system, outflows tend to reduce bank reserves and the money supply. The central bank in this case can offset such effects, but only within the limits of its reserves. To sacrifice exchange reserves to finance capital outflows may be a justifiable policy if other policies are in place that will put an end to the outflow, such a restrictive monetary policy. Otherwise exchange reserves may be sacrificed to little purpose. Under a floating exchange rate system a capital outflow tends to drive down the national currency, unless the central bank offsets the movement, within the limit of its reserves.

Broadly, speaking two approaches have been employed to control capital movements through exchange controls. One is through the licensing of inward or outward transactions. This procedure lends itself to dealing with large and clearly controllable operations. If applied to a great multitude of

^{28/} This argument would seem to imply that bonds denominated in the home currency must be imperfect substitutes for assets denominated in foreign currencies, since in this case sterilization of the capital inflows would affect domestic interest rates.

small transactions of often ill-defined purpose, the chances of leakages are high. The main merit of this approach is to maintain a unified exchange rate for current and capital account transactions.

An alternative procedure has been to allow capital transactions to take place in a separate market, at a separate and possibly floating exchange rate, through the use of a multiple (dual) exchange rate system as discussed in section V above. Inflows (outflows) can be limited by a rising (falling) exchange rate, or through action by the authorities. Price, i.e., the exchange rate, is affected, instead of quantity, i.e., exchange reserves, bank reserves and the money supply. A free market of this kind is basically a formalization of the "parallel" or "black" market that tends to develop under most foreign exchange control systems. By legitimizing the black market, it is able to handle larger transactions. It will also give owners of capital somewhat greater confidence that the international mobility of their money is protected.

A free market will inevitably attract a large number of non-capital transactions that are difficult to control. The balance in this market, therefore, will reflect not only the balance of inward and outward capital movements, but of these minor current-account invisibles. The satisfactory functioning of the system may require the authorities to channel some fraction of the total supply and demand emanating from current account transactions to the free market in order to keep the exchange rate from becoming very volatile. Too wide a spread between the official and the free rate would invite leaks from the controlled transactions sector.

The free market does not make unnecessary many of the controls that must be imposed on current-account transactions even if these transactions are unrestricted. There must be a surrender obligation for export proceeds. There

must be documentation for imports to make sure that goods are indeed coming in instead of capital going out. However, channeling of a large number of miscellaneous current-account invisibles through the free market does reduce the administrative burden of the controls.

If in the course of time the international accounts of the country come into good balance, including the capital account, the free market rate will tend to the level of the official rate. At that point, the system could be dismantled, with considerable benefit for the economy and little cost if any. The cyclical instability to which developing countries are externally imposed suggests caution in making such a move.

Considerations examined here under the heading both of current account and capital account controls indicate that during a balance of payments adjustment program the timing of the implementation and elimination of foreign exchange controls as policy instruments will be important. Generally, it has been argued that controls on capital transactions should be removed last, after the imposition of macroeconomic policies aimed at reducing the public sector deficit, adjustment of the real exchange rate, restraint of monetary growth, and after adoption of trade and domestic financial liberalization measures.

The rationale for this argument is that capital inflows have often been a major source of difficulty in the reform process as confidence is restored in a country's policies. This rationale rests on the assumption that large capital inflows will be less destabilizing if they are allowed to occur only after all other adjustment policies have been implemented, an assumption that is at least open to some question. Alternatively, it has recently been argued that exchange controls on capital account transactions can advantageously be relaxed while the adjustment process is still incomplete.^{29/} Under this

^{29/} See for example, Mathieson [1984].

approach, removal of such controls can be coordinated with stabilization policy. The advantage of the approach would be, among others, that a unified exchange rate can be adopted at an earlier stage in an adjustment process. This approach implies, however, that the final condition of a developing country following an adjustment program should be a total absence of current account and capital account controls. For reasons set out above, there is at least a question whether completely free capital movements are a desirable condition for a developing country even when all seems to be going well.

Development of general policy guidelines in this area must be pragmatic and recognize that success of various reform programs will depend importantly on the evaluation by economic agents and the government of the sustainability of the reform process and the likely policy regime that will arise if the reforms fail. Moreover, determination of the time at which to undertake different reforms will also be dependent upon an evaluation of the financial structure of corporations, banks, and the holdings of international reserves by the government.

BIBLIOGRAPHY

- P.A. Armella, R. Dornbusch, and M. Obstfeld, editors (1983), Financial Policies and the World Capital Market: The Problem of Latin American Countries. The University of Chicago Press, Chicago.
- Bhagwati, Jagdish (1978), Anatomy and Consequences of Exchange Control Regimes (from a Special Conference Series on Foreign Trade Regimes and Economic Development--National Bureau of Economic Research). Balinger Publishing Company, Massachusetts.
- Bruno, M. (1983), "Real versus Financial Openness Under Alternative Exchange Rate Regimes," in Financial Policies and the World Capital Market: The Problem of Latin American Countries, eds. Armella and others.
- Bruno, M. and Fischer, S. (1984), "Israel's Inflationary Process: Shocks and Accomodation." (Preliminary copy of paper) July.
- Calvo, Guillermo (1983), "Trying to Stabilize: Some Theoretical Reflections Based on the Case of Argentina," in Financial Policies and the World Capital Market: The Problem of Latin American Countries, eds. Armella and others.
- Diaz-Alejandro, Carlos (1984A), "Latin American Debt: I Don't Think We are In Kansas Anymore." Brookings Papers on Economic Activity #2. The Brookings Institution, Washington, DC
- _____ (1984B), "Goodbye Financial Repression, Hello Financial Crash," forthcoming in Journal of Development Economics.
- _____ (1983), "Stories of the 1930s for the 1980s," in Financial Policies and the World Capital Market: The Problem of Latin American Countries, eds. Armella and others, The University of Chicago, Press.
- Dornbusch, Rudiger (1984), "Exotic Exchange Rate Arrangements." Prepared for the Country Strategy and Policy Studies Division of the World Bank, October.
- _____ and Adroaldo Moura Silva (1984), "Dollar Debts and Interest Rates in Brazil," forthcoming in Revista Brasileira da Economia.
- Edwards, S. (1984), "The Order of Liberalization of the External Sector in Developing Countries," unpublished, June.
- Edwards, S. and Khan M. (1984), "Interest Rate Determination in Developing Countries: A Conceptual Framework." International Monetary Fund Research Department, December.
- Engle, C. and Frankel, J. (1984), "Why Interest Rates React to Money Announcements: An Explanation from the Foreign Exchange Market," Journal of Monetary Economics, January, pp. 31-39.
- Fischer, S. (1984A), "Israeli Inflation and Indexation." Presented for the conference on Inflation and Indexation, December 6-8, Washington, DC.

Fischer, Stanley (1984B), "The Economy of Israel." National Bureau of Economic Research. Elsevier Science Publishers B.V. North-Holland.

Flood, R. and Marion, N. (1984), "The Transmission of Disturbances Under Alternative Exchange-Rate Regimes with Optimal Indexing," Quarterly Journal of Economics, February 1982, pp. 41-66.

Flood, R. and Garber, P. (1984), "Collapsing Exchange Rate Regimes: Some Linear Examples," Journal of International Economics, August 1984, pp. 1-14.

Gill, David (1979), "Some Thoughts on the Implications of Different Financial Institutional Structures on Securities Market Development." *Las Instituciones Financieras en el Mercado de Capitales en Chile*. Vina del Mar, Chile, December.

Harberger, Arnold (1982), "The Chilean Economy in the 1970s: Crisis, Stabilization, Liberalization, Reform." *Carnegie-Rochester Conference Series on Public Policy* 17. North-Holland Publishing Company.

Howard, D. and Johnson, K. (1982), "Financial Innovation, Deregulation and Monetary Policy: The Foreign Experience." Presented at "Interest Rate Deregulation and Monetary Policy," conference sponsored by the Federal Reserve Bank of San Francisco, November.

Knight, P., Crowe, M., and Gelb A. (1983), "Brazil Financial Systems Review." The World Bank, Washington, DC, June.

Krueger, Anne (1981), "Analyzing Disequilibrium Exchange Rate Systems in Development Countries." (Preliminary copy of paper) December.

Krueger, Anne (1978), Liberalization Attempts and Consequences. (From a Special Conference Series on Foreign Trade Regimes and Economic Development--National Bureau of Economic Research.) Balinger Publishing Company, Massachusetts.

Krugman, P. (1979), "A Model of Balance-of-Payments Crises," Journal of Money, Credit, and Banking, August, pp. 311-25.

Mathieson, Donald (1984), "International Capital Flows, Capital Controls, and Financial Reform." Prepared for the Conference on "Pacific Basin Financial Reform," Federal Reserve Bank of San Francisco, December.

_____ (1980), "Financial Reform and Stabilization Policy in a Developing Economy," Journal of Development Economics, September, pp. 359-95.

Mathieson, Donald (1979), "Financial Reform and Stabilization Policy in a Development Economy." International Monetary Fund, Washington, DC, June.

McKinnon, Ronald (1984), "Financial Liberalization and the Debt Crisis in LDCs: The International Misregulation of Commercial Banks." Center for Research in Economic Growth, Stanford University, October.

McKinnon, Ronald (1981), "The Order of Economic Liberalization: Lessons from Chile and Argentina." (Preliminary copy of paper) October.

Mussa, M. (1983), "Optimal Economic Integration," in Financial Policies and the World Capital Market: The Problem of Latin American Countries, eds. Armella and others.

Obstfeld, Maurice (1984), "Capital Flows, the Current Account, and the Real Exchange Rate: Consequences of Liberalization and Stabilization." (Preliminary copy of paper) October.

Rogoff, Kenneth (1984), "On the Effects of Sterilized Intervention: An Analysis of Weekly Data," Journal of Monetary Economics, Vol. 14, September.

Shaw, Edward (1973), Financial Deepening in Economic Development. Oxford University Press, London.

Sibert, Anne (1984), "The Competitive Auctioning System for Foreign Exchange in Jamaica," internal memorandum, Federal Reserve Board, Washington, DC.

Simpson, T. and Parkinson, P. (1984), Staff Study No. 139, Board of Governors of the Federal Reserve System, September.

Veneroso, F. (1983), "Financial Instability in Developing Countries." The World Bank.

Wallich, Henry (1985), "The International Debt Situation in an American View: Borrowing Countries and Lending Banks." Remarks to the Verein fuer Sozialpolitik, Frankfurt, Germany, February.

Wallich, Henry (1984), "Banking Reform--the Case for Orderly Progress." The Banker, London, England, May.

Wallich, Henry (1984), "Perspective on the External Debt Situation." Comments to the annual meeting of the American Economic Association, Dallas, Texas, December.

Wallich Henry (1984), "The Foreign Impact of the U.S. Budget Deficit." Summary of remarks to the Swiss-American Society, Basel, Switzerland, December.

Wojnilower, A.M. (1980), "The Central Role of Credit Crunches in Recent Financial History," in Brookings Papers on Economic Activity #2, editors, William C. Brainard and George L. Perry, The Brookings Institution, Washington, DC.

The World Bank (1983), "The Colombian Investment Banking System and Related Financial Sector Issues." Projects Department of the Latin American and the Caribbean Regional Office, August.