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To: Members of the Executive Board

From: The Secretary

Subject: Recent Experience of Developing Countries with  
Floating Exchange Rate Systems

The attached paper reviewing recent experience of developing countries with floating exchange rate systems is circulated for the information of the Executive Directors.

Mr. Quirk (ext. 8520) or Mr. Huh (ext. 8525) is available to answer technical or factual questions relating to this paper.

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INTERNATIONAL MONETARY FUND

Recent Experience of Developing Countries  
with Floating Exchange Rate Systems

Prepared by the Exchange and Trade Relations Department  
(In consultation with other departments)

Approved by C. David Finch

May 22, 1986

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Introduction

In recent years, an increasing number of developing countries have adopted market-determined floating exchange rates. This development has represented a significant step forward in the evolution toward exchange rate flexibility that has taken place in the developing country group since the adoption of generalized floating by industrial countries in 1973. Before 1983 there had been only isolated instances of floating by developing countries in the context of the post-par value regime. Lebanon has had such a floating exchange rate for several years. Other experiences with market-determined unitary floating rates were quite shortlived, lasting for less than one year (Mexico--1976/77, Argentina--1978, Costa Rica--1981, and Chile--1982).

Discussion of the scope for floating exchange rates in developing countries has been characterized by concerns that in most of these countries exchange markets are thin and financial markets in general are underdeveloped, increasing the potential volatility of market-determined rates and the cost of hedging against it. In the literature, the use of flexible management of reserves rather than exchange rate flexibility and the adverse consequences of floating systems for domestic price stability have often been emphasized, and the discussion has questioned the developing countries' capacity to operate market-determined exchange rates. <sup>1/</sup> Despite this, within the past four years countries with fairly diverse economic and financial structures have adopted market-determined exchange rate systems. The first step toward the more widespread use of unified floating exchange rate systems by developing countries was the introduction by Uganda in mid-1982 of a secondary auction market for foreign exchange. Uruguay changed to a unified floating rate from a preannounced rate in late 1982. This was followed

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<sup>1/</sup> For recent surveys of the literature on exchange rate regimes in developing countries, see Peter Wickham, "The Choice of Exchange Rate Regime in Developing Countries," Staff Papers, June 1985, and John Williamson, "A Survey of the Literature on the Optimal Peg," Journal of Development Economics, 11 (1982), pp. 39-61.

in close order by Jamaica, Uganda, and Zaïre in the first half of 1984 (in each case involving unification of an existing official market and a free market introduced in the context of a Fund program). The Philippines adopted a system in which the exchange rate is determined in a unified market in October 1984, and was followed by Bolivia, the Dominican Republic, and Zambia in 1985. In January 1986, The Gambia adopted a unified floating market, and Guinea put in place arrangements for transition to a float.

General aspects of exchange rate policies in developing countries were reviewed by the Executive Board in 1982. 1/ Developments in exchange rate arrangements on the basis of the Fund's classification system were also examined by the Executive Board in 1982, when the present system of identifying "independently" (market-determined) floating arrangements was established. 2/ The role of exchange rate adjustment in Fund programs has also been reviewed in successive annual conditionality reviews. 3/ The intention of this paper is not to re-examine these general policy areas, but to focus specifically on recent experience with the adoption of floating exchange rates, including a comparison with the experience of countries which have managed their exchange rates essentially in accordance with relative purchasing power parity. Given that the capacity of developing countries for operating the arrangements for floating exchange rates has been a key issue in these countries, the paper also deals in some detail with technical and institutional aspects of those arrangements in which the Fund staff has been closely involved.

The paper is organized as follows: Section I examines the institutional setting and the form of exchange market arrangements. Problems that have arisen in the process of setting up the markets and in ensuring their efficient operation are also discussed in this section. Section II deals with related actions in the field of exchange and trade liberalization and development of forward exchange markets. The impact of floating exchange market developments is examined in Section III of the paper, including developments in nominal and real effective exchange rates, black markets for foreign exchange, payments arrears, and official and banking system capital flows and foreign exchange reserves. Although the emergence of floating markets is a relatively recent phenomenon in most of these countries, an attempt is made in this section to appraise the macroeconomic aspects of the experience, including a comparison with performance under regimes in

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1/ "Exchange Rate Policies in Developing Countries," (SM/82/8, 1/11/82).

2/ "Exchange Arrangements Maintained by Members" (SM/82/44, 2/24/82), and successive quarterly reports on this subject.

3/ "Issues in the Implementation of Conditionality: Improving Program Design and Dealing with Prolonged Use (EBS/85/277, 12/17/85), and "Formulation of Exchange Rate Policies in Programs Supported by the Fund (EBS/84/232, 11/16/84).

which the exchange rate is managed in such a way as to stabilize the real effective rate. Section IV provides a summary of the main issues.

I. Experience with Instituting and Operating Market Arrangements for an Independent Float 1/

Twelve developing country members of the Fund have adopted market-related floating exchange arrangements. Members adopting floating rate systems have represented a variety of economic structures and per capita income levels within the group of developing countries, and also have been geographically dispersed (Appendix Table 1). However, one fairly general characteristic has been the openness of their economies to trade, and therefore the critical importance of the exchange rate. The depth of the financial systems in the economies under study has also varied, broadly in accordance with per capita income.

The developing countries which have adopted independently floating systems 2/ had previously implemented a broad spectrum of arrangements. Bolivia changed from an exchange rate pegged to the U.S. dollar which was changed in an attempt to counteract the effects on competitiveness of rapid domestic inflation. In the Dominican Republic on the other hand, there was a one-to-one parity with the U.S. dollar that had been in place for many years, even before the establishment of a par value in 1948. The Gambia changed from an exchange rate that was fixed against the pound sterling, while the Philippines changed from a system of managed flexibility vis-à-vis the U.S. dollar that involved small but frequent changes, and Uruguay had an exchange rate involving preannounced changes in terms of the U.S. dollar. Zambia had previously fixed its exchange rate in terms of a currency basket.

Several of the countries with an independently floating exchange rate had previously maintained arrangements involving a fixed or managed

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1/ Lebanon's special security problems and associated data limitations make it difficult to assess the form and effects of exchange rate flexibility on its economy on a comprehensive basis. The assessment of South Africa's recent arrangements is also complicated by special factors. Exchange arrangements in both countries are therefore discussed to only a limited extent in this paper.

2/ Eight percent of developing country Fund members at present maintain independently floating systems (as of December 31, 1985). In contrast, 20 percent have managed floating arrangements, including those using specific indicators to guide their exchange rate policies, 39 percent maintain pegs or have shown limited flexibility in terms of single currencies (quasi-pegs), and the remaining 33 percent peg to the SDR or some other currency basket (Appendix Table 2). The determination of countries as "independently floating" is based on the limited extent of the authorities' intervention in the exchange market (see SM/82/440).

exchange rate for some transactions combined with a legalized free floating market for other transactions, before merging the two for a unified float (Bolivia, Dominican Republic, Guinea, Jamaica, South Africa, 1/ Uganda, and Zaïre). In three of these countries, the multiple exchange rates were maintained for a short period of time as a transitional device before unification. During the transition period, foreign exchange transactions were shifted to a newly created floating market (Jamaica, Uganda, and Zaïre).

Exchange arrangements including a legal secondary exchange market in which the exchange rate is freely floating are currently maintained by more than 15 Fund members. Although a free secondary market may serve as a basis for early exchange rate unification in accordance with established Fund policies, in most instances the market has been in place for a number of years and was in virtually all instances not adopted with this aim. The experience of Fund members with multiple exchange rate arrangements was discussed by the Executive Board, in April 1984 and February 1985, on the basis of three staff papers. 2/ The focus of the present paper is not on these arrangements; a brief summary of the experience with multiple rates and the treatment in Fund programs of exchange rate policies of members that have unified on the basis of a free secondary market is presented in Section I.3 below.

#### 1. Reasons for floating

Of the developing countries that have adopted floating rates, most did so because of severe balance of payments difficulties reflected in sizable external payments arrears, and in the context of discussions for a Fund-supported program. 3/ The exceptions were Lebanon, South Africa, and Uruguay. In the case of Lebanon, the maintenance of a floating exchange rate was seen as part of the country's commitment to an open and commercially free environment for trade, and reflected the highly developed financial markets in Lebanon. The decision by South Africa to float, at a time of relative balance of payments strength, was influenced at least in part by the desire to improve conditions for monetary control.

Uruguay, which has been one of the few Latin American countries to avoid external payments arrears in recent years, adopted a market-determined rate in 1982 following adverse experience with other relatively flexible arrangements. Prior to 1978, there had been a dual

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1/ After abolishing it in February 1983, South Africa reintroduced the dual exchange system in September 1985.

2/ "Review of Experience with Multiple Exchange Rate Regimes" (SM/84/64, 3/19/84) and background paper (SM/84/65, 3/20/84), and "Multiple Currency Practices Applicable Solely to Capital Transactions" (SM/85/19, 1/16/85).

3/ See Section I.3 below for a discussion of Fund program treatment of the systems.

exchange market in which the secondary market was freely operating. After unification in 1978, Uruguay for several years undertook a program of pre-announced exchange rate changes, but this system ultimately caused considerable instability in the capital and current accounts because exchange rate adjustments were insufficient.

In all other cases, the choice of floating exchange rates, all in the context of Fund programs except for Bolivia and The Gambia <sup>1/</sup>, has been made by countries with protracted balance of payments problems that included arrears. These problems had previously been addressed by extensive controls on foreign exchange transactions instead of exchange rate adjustments, which had in turn led to disintermediation in official exchange systems. In such circumstances, it was difficult to predict the equilibrium market rate, although the parallel market rate provided some indication. This uncertainty regarding appropriate levels for pegging or managing exchange rates has been an important reason for the adoption of floating arrangements. Also in these circumstances, it has been difficult, given the lack of official foreign exchange resources, to support a pegged rate which has come under market pressure, apart from through the accumulation of arrears. This is another reason why floating has often seemed the only feasible option.

The desire to bring into the open sector a large illegal parallel market in which the local currency was substantially depreciated, coupled with capital flight associated with that market, was an important reason for adoption of the unified floating arrangements (Bolivia, The Gambia, Jamaica, Uganda, Zaïre, and Zambia). The initial depreciation when floating began and subsequent movements to continuously maintain realism of the exchange rate were seen as a major factor in encouraging market participants to repatriate earnings. This was so particularly where the introduction of the floating market was accompanied by liberalization of exchange controls, permitting repatriated earnings either to be used for import needs or to be moved freely abroad. Proximity to a major financial center may provide an added stimulus for adoption of floating.

In the case of Zambia, the primary factors leading to adoption of the foreign exchange auction were a perception that the previous administrative system for allocating foreign exchange had broken down, and that the system would lead to a more efficient allocation, including more effective provision of foreign exchange for critical spare parts.

Another important reason in several instances was the desire on the part of the authorities to shed political responsibility for the

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<sup>1/</sup> The Bolivian system was adopted in the context of discussions for a Fund program. Because of the continued existence of arrears to the Fund, the Gambian floating system was not implemented as part of a Fund-supported program, although technical assistance was provided by the Fund.

adjustment of the exchange rate. Discrete adjustments to a managed or fixed exchange rate usually involved unpopular political connotations. With the rate determined in an open market, the authorities were better able to deflect political criticism and to focus their attention on other areas of economic management.

## 2. Choice of floating market arrangements

Experience with different forms of free exchange markets is as yet relatively limited, being for the most part of recent origin. The authorities must nevertheless choose the institutional arrangements that are best suited to their economic structure and financial institutions. An important concern in designing a market arrangement and in deciding on the role that the authorities themselves will play in instituting the market and monitoring its performance is to prevent the emergence of destabilizing monopolistic or collusive behavior.

Members contemplating floating exchange rates are faced with essentially two forms of market arrangements (Table 1). In most of the instances under discussion in this paper (The Gambia, the Dominican Republic, Lebanon, the Philippines, South Africa, Uruguay, and Zaïre), as in all developed countries with floating exchange rates, members have opted for a market that is operated within the private sector, by commercial banks and licensed foreign exchange dealers. In other instances, the authorities have felt constrained by institutional or social considerations to use an auction system to ensure a sufficiently competitive market. Foreign exchange is then surrendered to the central bank for auction to the highest bidders (Bolivia, Guinea, Jamaica, Uganda, and Zambia). In an auction market, the central bank conducts the market and serves as the channel for the auction process.

### a. Interbank system

The participants in an "interbank" market are commercial banks and, in some instances, foreign exchange dealers (if these are licensed for the purpose). Individuals and firms are permitted to bid through the commercial banks or dealers acting as their agents. Of the seven developing countries that have adopted an interbank system, most already had a sufficient number of commercial banks and foreign exchange dealers operating in the economy to ensure a competitive environment. In other instances, major considerations in the choice of an interbank system were the absence of sufficient manpower and expertise at the official level to conduct auction arrangements, and the belief that, with sufficient freedom of entry into the newly created market, the necessary institutions would develop quickly.

Under this system, the exchange rate is determined in negotiations between banks and their clients and in transactions between the banks. The exchange rate is free to vary from hour to hour and day to day. However, in order to ensure the competitive operation of the market, in all instances except The Gambia, the Philippines, and Uruguay, there are

Table 1. Summary Characteristics of Independently Floating Unitary Exchange Rate Arrangements in Developing Countries

	Number of Commercial Banks in Market	Form of Arrangement	Regulation of Commercial Banks' Position	Rate Determination	Role of Central Bank Intervention	Foreign Exchange Surrender Requirements	Forward Exchange Market: Development and Plans
Bolivia	19	Auction (daily)	Spot position, daily	Successful bidders pay their bid prices ("Dutch" auction)	Possible by adjusting the amount of foreign exchange supplied to auction, within the constraint of reserves, arrears, and external debt obligations. Setting of base price	100 percent of goods to the Central Bank	No plans to implement in the near future
The Gambia <u>1/</u>	3	Interbank	...	Negotiable between banks and their clients	Not specified	100 percent of goods and services to commercial banks except for some tourism proceeds. Receipts of Marketing Board to the Central Bank	No plans to implement in the near future
Dominican Republic	16	Interbank	Spot position, daily	Negotiable between banks and their clients	No intervention to influence the exchange rate	All the export proceeds to the Central Bank through commercial banks, with exceptions of some export proceeds of mining companies and tourism	No plans to implement in the near future
Guinea <u>2/</u>	3	Auction (weekly)	Spot position, weekly	Successful bidders pay clearing rate (marginal price) <u>1/</u>	Possible by adjusting the amount of foreign exchange supplied to auction, within the constraint of reserves, arrears, and external debt obligations	All the export proceeds and invisible proceeds to the Central Bank with minor exceptions for imports of specified goods and services	No plans to implement in the near future
Jamaica	10	Auction (twice a week)	Limit on total forward sales not matched by forward purchases.	Successful bidders pay their bid prices ("Dutch" auction)	Intervention to meet net reserve target	100 percent of all receipts to the Central Bank	Organized market exists, but very few transactions
Lebanon	Many	Interbank	Net foreign position (debit) should be within 15 percent of capital	Negotiable between banks and their clients	Smoothing operations	None	Market exists
Philippines	33	Interbank (telephone market and trading floor at Central Bank)	None	Negotiable between banks and their clients	Net accumulation of international reserves to keep minimum level	100 percent of goods and services to commercial banks	Unorganized market exists, but very few transactions

Table 1 (Concl'd). Summary Characteristics of Independently Floating Unitary Exchange Rate Arrangements in Developing Countries

	Number of Commercial Banks in Market	Form of Arrangement	Regulation of Commercial Banks' Position	Rate Determination	Role of Central Bank Intervention	Foreign Exchange Surrender Requirements	Forward Exchange Market: Development and Plans
South Africa <u>3/</u>	5	Interbank	An open position limit, both spot and forward, equal to 10 percent of the banks capital and reserve funds	Negotiable between banks and their clients	Smoothing operations	100 percent of goods and services to commercial banks	Organized market exists, but number of transactions is limited
Uganda <u>4/</u>	7	Auction (weekly)	None	Successful bidders pay clearing rate (marginal price) <u>1/</u>	Possible by adjusting the amount of foreign exchange supplied to auction	100 percent of goods and invisibles to the Central Bank through commercial banks	No plans to implement in the near future
Uruguay	12	Interbank	None	Negotiable between banks and their clients	No intervention on the interbank market. However, possible influence on rate formation through central banks' transactions with commercial banks, including a government-owned one	None	Organized market exists, but very few transactions
Zaire	10	Interbank	Spot position daily	Negotiable between banks and their clients	Very little intervention on the interbank market. However, possible influence on the rate formation through central banks' transactions with commercial banks	All the export and invisible proceeds to commercial banks. Receipts of mining companies and oil companies to the Central Bank	No plans to implement in the near future
Zambia	6	Auction (weekly)	Transactions subject to existing regulations	Successful bidders pay clearing rate (marginal price)	Possible by adjusting the amount of foreign exchange supply to auction, within the constraint of reserves, arrears, and external debt obligations	All the export proceeds and invisible proceeds to the Central Banks through commercial banks, except for the retention of privileges of the mining company and exporters of non-traditional products	No plans to implement in the near future

Source: Data provided by national authorities.

- 1/ One of the four commercial banks operating in the market at the inception of floating has since ceased operations.  
2/ Arrangements described are those envisaged in economic program supported by stand-by arrangement for use of Fund resources.  
3/ Arrangements in place prior to reintroduction of dual exchange rate in September 1985.  
4/ Arrangements in place prior to introduction of managed floating arrangements.

maximum or minimum limits imposed on commercial bank holdings of foreign exchange. The purpose of such regulations is twofold: first, to prevent major dealers from "cornering the market," or from using inside information to speculate on their foreign exchange operations; second, to prevent imprudently large exposure of banks to exchange risk. Such limits may be particularly important in the initial stages of the market when a minimum volume of trading is necessary to establish confidence. The initial size of the limits may be established by reference to the previous behavior of commercial banks' working balances. Such limits may also be seen as preserving the reserve management responsibilities of the central bank. A second type of regulation on the market would involve an upper limit on the volume of foreign exchange surrendered to each commercial bank, to prevent any bank cornering the market in a flow sense. Such a limit, although not used in arrangements to date, could be necessary in countries where the foreign exchange receipts of the economy accrue to one or a few major transactors who could then direct all of their foreign exchange earnings to one exchange dealer. If constrained by the stock or flow limits, banks must either buy or sell from other banks or, if other banks were also at their limits, transact with the central bank.

Another important form of official involvement in the interbank market is the conduct of a periodic fixing session at which the central bank has representatives present, and may also transact. At the rate fixing sessions, held at least once a week, the commercial banks trade their open positions in foreign exchange and an exchange rate is fixed taking into account the outcome of the previous fixing and subsequent transactions between banks and their customers during the week. The fixing exchange rate is usually set at a level which allows the largest volume of purchase orders to be transacted, and in the course of the fixing session commercial banks trade short and long positions according to their needs at this rate; a minimum volume of transactions may be specified by the central bank. The fixing rate is also used for customs valuation and other official purposes. Particularly in economies marked by a relatively small number of transactors, or by other political or institutional tendencies toward collusion, the fixing session is an important means of providing the authorities with a view into the operation of the system, and thus preventing abuses. In countries where there is an inadequately defined budget for foreign exchange expenditures by the government itself, there may also be rules concerning the entry of the government or government enterprises into the interbank market, either in the course of the week or at the time of the fixing. Such rules may be especially relevant where the floating arrangements are introduced ahead of fiscal adjustment measures.

In most instances, there are official requirements for supply of exchange to the official market. All countries in this group, except Lebanon and Uruguay, have surrender requirements for foreign exchange. In the Philippines, all receipts from exports of goods and services are required to be surrendered to commercial banks. Receipts of the marketing board in The Gambia and receipts of mining companies and oil

companies in Zaïre are required to be surrendered to the central bank. In the Dominican Republic, foreign exchange earnings of traditional exports of goods and services subject to an exchange surcharge (sugar, cocoa, coffee, tobacco, and most services other than tourism) are required to be surrendered to the central bank. The significance of the surrender requirement to government authorities is that, although the government uses the exchange rate determined in the market, it may seek to guarantee the provision of foreign exchange for certain purposes. The surrender requirements are therefore a consequence of official intervention in the allocation of foreign exchange by nonprice methods, e.g. import licenses or exchange restrictions.

In some cases, portions of the supply and demand of foreign exchange are allocated outside the market. Such "extra-market" transactions occur when the central authorities retain exchange surrendered to them for their own use, or when private sector exchange earners are granted "retention privileges" to use or sell the retained amounts outside the market. This results in less information on transactions being channeled through the market, and a consequent loss of efficiency in the floating arrangements. As will be seen below, this has led on occasion to severe instability of the exchange rate, especially when the information is ultimately made available to market transactors, and expectations are corrected suddenly.

Demand for foreign exchange by the public sector, including public enterprises, is met at the prevailing exchange rates either through the commercial banks or through the central bank. In Uruguay the central bank acts as an agent when it is requested by the government to purchase on its behalf foreign exchange from commercial banks. In the Dominican Republic and the Philippines, the central bank sells foreign exchange to the government from receipts surrendered to it. In The Gambia and Zaïre, debt service obligations of the public sector are paid from exchange surrendered to the central bank. However, the government may obtain foreign exchange from commercial banks for other purposes. In most countries severe shortages of foreign exchange for building up depleted reserves and meeting external debt service obligations, including the reduction of arrears, make it very difficult for the central bank to become a net seller to the interbank market. On the other hand, excessive purchases by government would tend to over-depreciate the domestic currency, leading to political and social difficulties. Intervention will therefore usually be limited to very short-run smoothing or seasonal operations and purchases for gradual reconstitution of reserves.

For the efficient and competitive operation of the interbank market, it is important that exchange rates determined in these transactions be widely and openly published so that the possibility of collusive practices by commercial banks is reduced, and the regulations set specific requirements to this effect. The central bank may in addition set maximum commissions that may be charged by commercial banks. Purchasers of foreign exchange may also be required to provide

documentation that the purchase is for transactions in accordance with prevailing exchange and trade controls and income tax regulations.

An important question in setting up a competitive market is the degree of freedom of access. In several countries, transactions are limited to certain groups. In Zaïre, foreign exchange dealing licenses are granted only to commercial banks and hotels. There is no specific information on the network of informal foreign exchange dealers, but it is thought to be small and scattered. In the Dominican Republic, the foreign exchange market is a very broad one owing to the openness of the economy and the prior existence of a secondary market in which some 16 commercial banks and more than 90 foreign exchange houses participated. At the other end of the spectrum is the market in The Gambia, in which only 3 commercial banks participate, and nonbank foreign exchange dealers are not permitted to participate in the fixing session. Generally speaking, the easier are entry requirements into the market, the more competitive and stable it will be.

b. Auction markets

The role of the authorities in an auction system (as conducted by Bolivia, Guinea, Jamaica, Uganda, and Zambia) is a more central one than in an interbank market. Receipts from specified exports and services are surrendered to the central bank at the prevailing exchange rate and are auctioned by the authorities on a regular basis. The central bank decides the amount of exchange to be auctioned, and the minimum reserve price below which it will not accept bids. The minimum amount of the sales may be predetermined as part of a macroeconomic program. The central bank may decide to auction foreign exchange in minimum amounts of, say, US\$50,000, allowing banks to bid on behalf of their customers. All bidders with a valid import license (where licensing requirements are retained) are required to lodge an advance deposit, either partial or equivalent to 100 percent of the foreign exchange they intend to purchase, before the submission of bids. The bids submitted to the auction are then examined and all bids in excess of the highest bid which fully exhausts the available supply of foreign exchange (i.e., the market-clearing price) are accepted. The market-clearing marginal rate (the average exchange rate in Bolivia) becomes the market exchange rate. After the auction, the market exchange rate, the total number of bids received, and the number of successful bidders are announced. The auction-determined exchange rate applies until the next auction date to all exchange transactions, including surrenders for the next auction and any transactions that may not be required to be channeled through the auction market (e.g. transactions of the government). Advance deposits lodged by unsuccessful or partly successful bidders are returned in whole or in part, respectively, but bids are normally not permitted to be withdrawn. If a successful bidder fails to make full payment for his foreign exchange within a specified period, he may be subject to a fine that may be collected from the deposit he has lodged. Spreads between buying and selling rates of individual commercial banks and any limits on commercial bank foreign exchange positions are closely monitored by

the central bank to ensure that collusive practices are not involved, and that they reflect reasonable profit margins.

Perhaps the basic difference between interbank and auction system arrangements is in the treatment of the supply of foreign exchange to the market. An essential feature of an auction market arrangement is that it requires the surrender of foreign exchange to a centralized point, which to date has been the central bank of the country organizing the market. In contrast, in an interbank arrangement, the ownership of foreign exchange may remain diffused in the private sector. In some auction arrangements (as with the interbank arrangements described above) the surrender requirement is less than complete, and retention allowances have been kept for certain export or other foreign exchange earners. Similarly, the supply by the central bank of foreign exchange it has collected may be less than complete, as the central bank retains a certain portion of foreign exchange from the market for the use of government.

In Bolivia, Jamaica, and Uganda, all export proceeds are required to be surrendered to the central bank. In Guinea, however, there are minor exceptions for exports of specified goods and services. In these four countries, all sellers of foreign exchange to the central bank are entitled to receive local currency at the auction market exchange rate for all foreign exchange surrendered. In Bolivia, in order to stimulate surrender, those surrendering foreign exchange were for a short period of time able to obtain an exchange reimbursement certificate in an amount equivalent to 10 percent of the foreign exchange surrendered. In Zambia, the authorities have accepted, on a transitional basis, retention privileges for the mining company and exporters of nontraditional products, reflecting concerns about the availability of foreign exchange. For example, in the latter case, about 50 percent of total export proceeds are estimated to be retained by exporters. However, the Zambian authorities (and the Ugandan authorities also) introduced a policy, whereby the source of foreign exchange earnings is no longer subject to declaration, in order to encourage capital inflows into the system.

Once the central bank obtains the foreign exchange, it may put some portion aside for its own uses--accumulation of reserves, reduction of external arrears, and payments of external debt obligations. In Guinea, Jamaica, Uganda, and Zambia, payments for official imports, such as petroleum and some other payments, are made by the central bank from the surrendered foreign exchange, and the other available foreign exchange is auctioned. The foreign exchange requirements of public enterprises may also be provided at the official exchange rate, or the enterprises may be required to purchase foreign exchange in the auction market (Bolivia, Jamaica, and Uganda). Most of these requirements are, in practice, met outside the auction in Jamaica. The net effect of these arrangements under which government needs are met outside the auction at the market rate is to limit severely the proportion of overall foreign

exchange earnings that is channeled through the auction market. <sup>1/</sup> In two cases (Uganda and Zambia), the amount supplied to the market has been largely prespecified in absolute terms, although subject to some variation according to the balance of payments performance (Uganda, Zambia). In the other case (Jamaica), the amount supplied to the market has been larger and has naturally fluctuated with overall balance of payments developments. The retention and sequestering of exchange for official purposes, although undertaken to ensure availability, has often created problems both for the flow of information to the auction market and for the provision of sufficient exchange for orderly discharge of current demands, by reducing confidence in the operation of the market and thus sales to it.

The other aspect of the supply side of the market, namely the exchange rate applying to sales to the central bank, in part for the auction, also marks an important difference from the interbank market system. Under the interbank system the exchange rate may be determined directly and may vary continuously during business hours by negotiation between buyers and sellers, but under the auction system, which functions discretely, surrender occurs in practice at the exchange rate determined in the preceding auction. This may create uncertainty for market participants, and a risk of exchange loss in the interim for participants engaged in both purchases and sales in the market. Of course, the more frequently the auctions are conducted, the less inefficiency in the market clearing process will result from this source. In addition to adding to exchange risk, infrequent auctions could also cause delays in the availability of exchange. Further delays will result if participants' difficulties in assessing the clearing price cause them to make one or two unsuccessful bids before finally obtaining exchange. Auctions take place daily in Bolivia, twice a week in Jamaica, and weekly in Guinea, Uganda, and Zambia.

Eligibility for participating in the auction on the demand side of the market is basically determined by the restrictive system of the country in question (see next section). In addition, there may be technical requirements that must be satisfied in order to establish the ability of a participant to make the local currency payment and to otherwise consummate a successful bid. In Bolivia, any individual or legal institution that wishes to obtain foreign exchange is permitted to submit a bid in the auction, although each bid must have a minimum value of US\$5,000 and must be accompanied by a banker's check in domestic currency equivalent to the bid. In Jamaica, private participants in the market comprise all bona fide importers with valid due or outstanding payments, and other nonbank applicants holding foreign exchange approvals of the central bank. Bids for transactions below US\$50,000 are aggregated and presented by Jamaican commercial banks on behalf of

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<sup>1/</sup> In Jamaica, approximately 47 percent of foreign exchange inflows in 1985 was auctioned. In Uganda and Zambia, the comparable ratio is estimated to be as low as 25 percent.

their clients. In both Bolivia and Jamaica, all public sector institutions must also validate their participation by producing either evidence of deposit of the domestic currency equivalent under the commercial bank deposit scheme (Jamaica), or a banker's check (Bolivia). In Guinea, all transactions of the public sector are conducted at present in the primary exchange market (first window) which handles inter alia external debt service obligations and official petroleum imports. Transactions of the mining companies are also conducted at this window, while all other trade transactions are conducted at the second market window. In the initial stage of operation of the Ugandan market, bids for foreign exchange were limited to imports (excluding oil and essential spare parts and capital goods), to invoices made out by foreign airlines for transportation, and to private sector service and transfer payments. In Zambia, all public enterprises, except the mining enterprise, must bid for their foreign exchange requirements in the auction.

Some of these countries have penalties for the successful bidder who fails to take the bid within a certain period, even though he has deposited with his commercial banks checks against the full local currency value of his foreign exchange application. In the case of Zambia, for example, a penalty not exceeding 10 percent of the amount of the bid will be imposed on the bidder if the Foreign Exchange Committee finds a blatant abuse of the foreign exchange arrangements. A bidder found persistently abusing the arrangements may be placed by the Committee on a black list for up to 12 months, during which time the individual is disqualified from participation in the market. In countries with floating systems that have retained import or capital controls, pre-existing legal penalties for contravention of these regulations may also continue to apply.

An important aspect of auctions is the choice of arrangements for determination of the exchange rate between a "Dutch auction" and a "marginal pricing" approach. Under the Dutch auction system, each bidder whose bid is accepted must pay his bid price for foreign exchange. This system has been applied recently by two Fund members (Bolivia and Jamaica). Participants in this form of auction may pay a price for foreign exchange that is significantly higher than the market clearing price if they assess demand conditions in the market incorrectly, but their bid is successful. Under the marginal price system a single rate--the most appreciated bid price at which the available foreign exchange is exhausted, which is the market-clearing price--is applied to all successful bidders. Bidders who have offered rates more depreciated than the market clearing rate will receive all the foreign exchange they have bid for at the clearing rate. Those who have offered a rate more appreciated than the clearing rate will not receive foreign exchange and those who have offered the marginal rate will receive only part of what they have bid for, on the basis of an allocative rule. Three Fund members (Guinea, Uganda, and Zambia) operate marginal price auctions. In the case of Jamaica, the authorities switched to a Dutch auction from a marginal pricing auction mainly because they were concerned that speculators would act on the belief that the Jamaican dollar would depreciate sharply against foreign

currencies, and that these speculators should pay the full price of their bid. In practice, however, participants in the Jamaican auction have been able to obtain sufficient information regarding each other's bids for the spread between buying and selling rates to remain very narrow. Similarly, in Bolivia, following a settling down period of a month or so after introduction of the Dutch auction, the successful bids in the auction also converged within a narrow (less than 2 percent) range.

A possible difficulty with the Dutch auction system is that it may inhibit entry to the market by participants who fear having to pay a price significantly higher than the clearing price for exchange if their bid is successful, leading to continuous existence of black market and collusion before auction. The risk would be increased if significant spreads actually do emerge between successful bids. For example, an importer could be left with overpriced goods on his hands relative to those held by others bidding in the market. However, the experience of the Jamaican and Bolivian Dutch auction systems to date has been that the spreads in the market have been very small; in part in Bolivia because the illegal parallel market provides a guide. A more basic criticism of the Dutch auction system is that it involves price discrimination, and promotes collusion to ensure that the consumer surplus is not appropriated by those administering the auction, while the marginal approach to auction pricing is the best approximation to normal private markets, in which the consumer surplus is not appropriated. Under a marginal pricing approach, rates of return are free to vary and thus to direct foreign exchange to the most valued uses.

The Dutch auction approach raises questions as to which exchange rate will be relevant to extra-auction market transactions (e.g. government transactions). In Bolivia, the exchange rate struck and announced for this purpose is the weighted average of successful bids, 1/ 2/ while in the case of Jamaica it is the lowest price at which exchange was bought and sold in the auction--that is, the marginal price. 3/ Another aspect of the Dutch auction system is that, to the

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1/ It has sometimes been suggested that this weighted average (or a median) approach could also be used to determine the single "market rate," but it would present a problem for those successful bidders who bid below the average price.

2/ Initially, the official exchange rate was calculated by including also the unsold balances valued at the Central Bank's minimum price. The reason for this practice was the Central Bank's concern that exporters might manipulate the exchange rate in their favor in unusually thin exchange markets.

3/ The use of a marginal auction approach for a secondary dual market may also make transition to a unified freely floating market easier to achieve than unification of Dutch auction systems, because of the multiplicity of exchange rates under the latter.

extent that it gives rise to exchange rate spreads of more than 2 percent between the buying and selling rates as a result of official action, a multiple currency practice arises. In the case of Jamaica, the Fund approved the resulting multiple currency practice on a temporary basis; approval is being proposed for the Bolivian practice.

Another consideration in the setting of exchange rates is the use of a reserve price for foreign exchange, i.e., the most appreciated exchange rate at which the central bank will undertake to supply exchange. In general, a reserve price has not been set and should not be necessary, as countries with these systems have generally been in a situation of overall excess demand for foreign exchange. However, in some cases where the market is subject to sporadic supply, including strong seasonality, or where the arrangements have not been in place sufficiently long to ensure adequate knowledge of the system among participants, a reserve price may serve a stabilizing function.

c. Issues that have arisen in the choice and implementation of floating arrangements

The basic objective of auction and interbank market systems is to establish an exchange rate that will move flexibly to equilibrate the supply of and demand for foreign exchange and thus to reduce dependence on exchange and trade restrictions. The choice between the two forms of arrangement in any particular case must take into account the institutional and economic structure of the member concerned. Where a sufficient number of capable commercial banks exists or there is a pre-existing network of operators dealing in the parallel market, the interbank arrangement is likely to be the more efficient, and will require less resources at an official level to ensure its success. However, one question that may be considered open is whether provision for freedom of entry into a floating market, even when the number of capable banks is initially small, will result quickly in sufficient institutional depth. The existence of experienced brokers in often extensive legal and illegal parallel markets suggests that this will normally be the case. One consideration in the choice of the form of floating arrangement is the extent to which collusion among participants may be expected. As discussed earlier, there are ways of ensuring that one or several operators do not corner the market, <sup>1/</sup> but in a country that has had a history of commercial domination by a small group, central bank organization of an auction market may be preferable to an interbank arrangement. On the other hand, where a primary consideration of the authorities in choosing to float is their desire to distance themselves from responsibility for the setting of the exchange rate, the administration of the auction by the central bank may run counter to that objective.

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<sup>1/</sup> See the discussion on pages 6 and 9.

In the case of Guinea, an interbank market was considered inappropriate by the authorities because there are only three commercial banks operating in the country and because the public sector is the main source of foreign exchange earnings. Likewise in Uganda, an interbank market was considered unworkable because of the limited number of commercial banks and the danger of collusion. In addition, since coffee was the main source of foreign exchange earnings, and since it was exported by the government, it was thought that an interbank market would not be efficient. Further, profits that the central bank would earn from foreign exchange auctions were seen as an important source of budget revenue that could not be captured by an interbank market. The commercial banks have been the only legally recognized foreign exchange dealers in Uganda.

On the other hand, the authorities in The Gambia chose an interbank arrangement, although there were only four banks operating in the country at the time. The reasons for this were first, that the central bank did not have enough foreign exchange and manpower to conduct the auction; second, that the banks were trusted by the authorities to take a role in allocating foreign exchange efficiently to institutions, including small private traders; and third, that operation of the system was envisaged to be simple but comprehensive. In practice, some difficulties have arisen in ensuring the competitive operation of this market.

Owing to the wide dispersion of commercial banks throughout the Philippines, it has not been considered necessary to legalize foreign exchange dealerships other than commercial banks, but there are many unauthorized dealers specializing in workers' remittances and other small flows. Similarly, the establishment of a market in Zaïre was facilitated by the existence of a well-established commercial banking system with 10 banks. Foreign exchange dealer licenses are granted only to commercial banks and hotels. There is no specific information on the network of foreign exchange dealers either before or after the float, but it is thought to be small and scattered. In the Dominican Republic, the existence before the float of a free secondary market in which 16 commercial banks and more than 90 foreign exchange houses and hotels participated meant that the foreign exchange market was already a relatively broad one.

In the implementation of some floating arrangements, the effects of pre-existing external payments arrears have created difficulties. In Jamaica, the overhang of arrears in the early operation of the market was so large that it adversely affected confidence in the auction market by causing an almost complete cessation of new imports. For this reason, the backlog of arrears was removed from the market and subjected to a phased repayment. This could in principle have been done by purchases from the auction, but it was actually done by setting aside a certain portion of the proceeds of surrender before the auction. Provision was made for all applications relating to previous due dates to be registered with the central bank for rescheduling. The

applications were required to be accompanied by an affidavit from the foreign creditor to the effect that the amounts remained due and payable. Once verified, the arrears would not be permitted direct access to the market; instead, a fixed sum would be set aside on a regular basis by the central bank for the rescheduled payments. An exchange rate guarantee was not provided, and supplementary local currency deposits were required at the rate on the day of actual payment. Modalities for the rescheduling might include cash payment of foreign exchange over a period of years, or investment of the local currency counterpart domestically; in the latter case, liquidation or repatriation of the investment might be permitted only at the end of a fixed period. Provision would be made for blocked counterpart deposits against all the arrears. An important aspect of the handling of the arrears "overhang" problem has been early contacts with creditors to ensure the best possible environment for the start-up of the market (Jamaica, Zaïre, and Zambia).

Questions of the adequacy of international reserves and techniques of foreign exchange "cash flow management" have also been raised in countries considering floating arrangements, and other flexible arrangements for the exchange rate. To assist in providing as stable an environment as possible for the introduction of a floating rate system, and with the aim of minimizing the initial depreciation of the exchange rate after floating, arrangements have been made in several instances for "bridging" finance from donor country official or commercial bank sources ahead of drawings under a Fund stand-by arrangement and rescheduling of existing external obligations. The role of discussions with the World Bank and other donors and creditors has been important at this stage in underpinning confidence in the new market, by providing reasonable assurance that balance of payments financing will be forthcoming. The positive effect on capital account of the floating arrangement itself, as examined in Section III below, may be expected to assist in stabilizing the exchange market.

For example, in the period preceding the establishment of an auction market in Bolivia, the authorities were concerned that, because of the thriving unofficial market, the supply of foreign exchange to the auction would be limited. They saw this problem as being exacerbated by the lack of an effective institutional apparatus to ensure that export proceeds flowed through the official channels. The authorities therefore considered using official reserves and borrowing from official sources abroad to make the foreign exchange market in the initial stages. In the event, this proved unnecessary. The demand for foreign currency in the official market fell initially below supply, reflecting in part the high reserve price, as well as the relatively low demand because of a lack of experience with the market mechanism. As a result, the authorities built up official foreign exchange reserves in the start-up period.

Beyond the start-up period for the floating market, foreign exchange cash flow management to accommodate seasonal or other identi-

liable reversible factors also plays an important role, given the generally low level of international reserves in this group of countries. A problem that is foreseen in the market recently established in The Gambia is the potential instability of both the volume of transactions and the exchange rate. Tourist receipts fluctuate widely from season to season, and exports of groundnuts also have strong seasonality. It will be important for the market to absorb this instability, and accumulation of adequate reserves either by the central bank or in the banking system for use during the lean season is an aim of the arrangement. Tourism receipts are also highly variable in Uruguay.

In the case of Guinea, all banks transacting on behalf of customers credit the central bank with the entire counterpart of any transaction within three working days. Residents must also obtain permission to open convertible foreign currency accounts in order to auction funds through authorized banks; with liberal authorization of these accounts, the auction market could become an important additional source of foreign exchange, but without it, supply could be curtailed.

Certain difficulties have marked the operation of the auction system in Jamaica from time to time. First, owing to political sensitivities there have been tendencies for large importers at times to restrain their demand for foreign exchange. Second, importers were for a time in 1984 not permitted to bid in the auction market for foreign exchange with which to repay letters of credit, and banks would not open letters of credit unless the importer had on deposit the foreign exchange. However, as most letters of credit were required by creditors to be on a prepaid basis (owing to Jamaica's arrears), this documentation requirement effectively meant that market access was denied to the importers. The "vicious circle" problem was addressed for a time by having importers present exchange control documentation following the auction, and by the institution of penalties should proper documentation not be presented. As the market settled down, banks have resumed opening letters of credit on a more normal basis. Third, importers who had no evidence of income tax clearance were for a period of months banned from the auction. Delays in obtaining this clearance were long enough to influence strongly the total demand of the auction, and the exchange rate was virtually fixed while this requirement was in effect. Fourth, sizable official foreign exchange operations outside of the auction have contributed from time to time to the instability of the exchange rate. This has occurred when supply to the market has been increased for a short time through an incurrence of arrears, an unsustainable level of short-term credits by the public sector, or sales of government assets abroad. Subsequently, the demand re-entered the market and the rate depreciated sharply, from a short-term plateau. Since October 1985, the exchange rate has been virtually fixed, at the expense of incurrence of arrears, including nonprovision of exchange for successful bids.

The main difficulty with the operation of the Philippine system has been an unexpected rigidity of the exchange rate in terms of the U.S. dollar for some periods of time, which has been damaging to export industries. In general, this outcome has been explained by tight monetary policies reflecting the authorities' intention to constrain inflation, accompanied by large short-term capital inflows; it has therefore not been a necessary consequence of the exchange rate arrangements themselves. During other periods, most recently during the first quarter of 1986, flexibility in the exchange rate system played an important role in limiting the re-emergence of a black market, and in protecting the balance of payments from rapid domestic monetary expansion.

In Uganda, several problems were experienced during the implementation of the auction arrangements. First, participation in the auction has been subjected to various forms of government intervention such as import license requirements and tax payments certificates. Issuance of import licenses was for a time speeded up, but the issuance continued to be on an ad hoc and discretionary basis. Second, participation in the auction has on occasion been confined to a limited group of influential importers. Third, it has not been possible for participants to verify whether the announced rate was in fact the market clearing exchange rate based on the actual bids submitted. Fourth, although import licenses and other supporting documents have been required of participants in the auction, the use of foreign exchange has not been closely monitored (e.g. the arrival of imports has not been closely checked), so that the foreign exchange said to be purchased for import payments may well have been used for illegal capital transactions. Fifth, initially the auction system required partial counterpart deposits against submitted bids; however, later, the commercial banks decided how much cash and credit were required to back a bid, depending on the creditworthiness of the client.

The major problem in the institution of the Zaïre market was an initial reluctance on the part of commercial banks to release foreign exchange to it. To free up supply, the net foreign exchange position of each commercial bank was limited to a certain proportion of its own resources. The market has since functioned with few problems.

In the period preceding the establishment of Zambia's auction market, the authorities were concerned with the possible effects of a completely free exchange market on the exchange rate and other macroeconomic variables, given the limited supply of convertible foreign currencies. Initially, therefore, the exchange rate was determined on the basis of an auction that involved only a selected group of foreign exchange users. Those excluded from the auction included the commercial banks themselves, the government and government-owned enterprises, as well as the mining company. Importers not excluded had to show documentary evidence to the commercial banks of their import licenses and pro forma invoices for imports. Also in the initial stages of the auction, a number of bidders were unsuccessful in obtaining foreign

exchange if their bid price was judged by the authorities to be too high, or if they had recently obtained foreign exchange through the auction market. The authorities have recently expanded the coverage of the auction to allow the importers who were formerly excluded from obtaining foreign exchange in the auction market, and import licenses are now issued for a fee without restriction.

### 3. The role of the Fund in the floating arrangements

The need for exchange rate flexibility has been an important ingredient in the design of members' financial programs supported by the use of Fund resources. In the period surveyed here (January 1983-December 1985), most programs included elements to ensure greater flexibility in exchange rate policy, either by managing the rate or by permitting it to adjust in response to market forces. Out of a total of 81 arrangements for 49 members approved by the Fund's Executive Board during the period under analysis (including five extended arrangements), 54 contained elements of exchange rate flexibility <sup>1/</sup> (Table 2). Most of these did not involve a formal change in the member's exchange arrangements, such as adoption of floating, but rather an intention to maintain at least the existing level of external competitiveness as measured by the real (inflation-adjusted) exchange rate. This type of objective was present in 36 programs in this period. In 31 instances, the target was linked to frequent exchange rate adjustment in the context of managed floating arrangements. In the other 5 instances, the value of domestic currency was pegged either to the SDR, or to another currency composite, and was to be adjusted periodically.

Frequent adjustment to the exchange rate under managed floating arrangements with the aim of maintaining or increasing competitiveness (as measured by a real effective exchange rate) was therefore the prevalent form of flexible exchange rate policy in the period surveyed (67 percent of programs). <sup>2/</sup> Use of market factors in exchange rate policy implementation was involved in 30 percent of the programs--of which 13 percent represented provisions for the transfer of transactions to the free parallel exchange market, and the remaining 17 percent called for the adoption and maintenance of independently floating arrangements.

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<sup>1/</sup> In the case of the 27 arrangements for which no specific commitment of this nature was made, these arrangements were for 14 countries that pegged the value of their currency to a major currency (Belize, Central African Republic, Dominica, Equatorial Guinea, The Gambia, Grenada, Guatemala, Haiti, Ivory Coast, Liberia, Mali, Niger, Panama, and Togo); all but six of them are members of regional monetary unions.

<sup>2/</sup> Comparisons of the experience with this type of arrangement with the independently floating arrangements are presented in Section III.2.c below.

Table 2. Fund Programs with Flexible Exchange Rate Policies  
January 1983-December 1985

	Board Approval	External Competitiveness Target 1/		Other Forms of Flexibility		
		Maintenance of External Competitiveness	Increase in External Competitiveness	Transfer of Transactions to the Free Market	Adoption or Maintenance of Independently Floating Arrangements	Initial Depreciation and Review Clause
Argentina	October 1983	*				
Argentina	December 1984	*				
Bangladesh	March 1983			*		
Bangladesh	December 1985		*			
Brazil	February 1983	* 2/3/				
Chile	January 1983	* 3/				
Chile	July 1985	* 3/				
Costa Rica	March 1985	*				
Dominican Republic	January 1983			*		
Dominican Republic	April 1985				*	
Ecuador	July 1983			*		
Ecuador	March 1985			* 3/		
Ghana	August 1984		*			
Hungary	January 1984	*				
Jamaica	June 1984				*	
Jamaica	July 1985				*	
Kenya	March 1983	* 2/4/				
Kenya	January 1985	*				
Korea	July 1983		*			
Korea	July 1985	*				
Madagascar	December 1983	* 2/4/				
Madagascar	April 1985	* 3/				
Malawi	September 1983	* 2/4/				
Mauritania	April 1985	* 2/3/				
Mauritius	May 1983	* 4/				
Mauritius	March 1985	*				
Morocco	September 1983	*				
Morocco	September 1985	*				
Nepal	December 1985	*				
Peru	April 1984	*				
Philippines	February 1983		*			
Philippines	December 1984				*	
Portugal	October 1983	* 2/				
Sierra Leone	February 1984					*
Solomon Islands	June 1983	* 2/				
Somalia	January 1985			* 2/		
Sri Lanka	September 1983	* 2/				
Sudan	February 1983			* 2/		
Sudan	May 1984			* 2/		
Thailand	June 1985	* 2/				
Turkey	June 1983	* 3/				
Turkey	April 1984	* 3/				
Uganda	September 1983			*	*	*
Uruguay	April 1983				*	
Uruguay	September 1985				*	
Western Samoa	June 1983	* 2/				
Western Samoa	July 1984	*				
Yugoslavia	April 1984	* 3/				
Yugoslavia	April 1985	* 3/				
Zaire	December 1983				* 2/3/	
Zaire	April 1985				*	
Zambia	April 1983					*
Zambia	July 1984	*				
Zimbabwe	March 1983	* 2/4/				

1/ Programs which included elements to either maintain or increase external competitiveness as measured by the relative rate of inflation.

2/ Initial devaluation.

3/ Fund program included performance criteria on exchange rate developments.

Of the 13 countries that have operated a floating exchange rate regime in the period January 1983 to February 1986, the establishment of a unified floating exchange rate was a prior action for a Fund program under discussion in eight cases (Bolivia, the Dominican Republic, The Gambia, Guinea, Jamaica, the Philippines, Zaïre, and Zambia), and it was a performance criterion under an existing program in four cases (Guinea, Uganda, Uruguay, and Zaïre) (Table 3). <sup>1/</sup> In all these instances, the Fund staff played a role in providing assistance at the level of broad macroeconomic policies, and at a technical level, in formulating and adapting the systems to take account of the individual characteristics of the member's economic and financial structure.

In some instances, the floating market was introduced gradually, by the institution of a secondary market for certain transactions in which the rate was freely determined, which was followed by a transfer of transactions to that market, and finally, by unification. This gradualist approach to adoption of a floating rate system was taken in the Dominican Republic, Guinea, Jamaica, South Africa, and Uganda. In the case of the Guinean, Jamaican, and Ugandan arrangements, the dual market was instituted in the context of the Fund program, with a performance clause for early unification in accordance with Fund policies discussed by the Executive Board in 1983 on the occasion of its review of the experience with multiple exchange rates. <sup>2/</sup> Temporary recourse to multiple exchange rates in some instances reflected a partial depreciation of the exchange rate for certain transactions. The existence of the secondary market was not seen initially as a basis for unification in accordance with the floating rate regime in the Dominican Republic, Jamaica, or South Africa. However, in these instances, the presence of such a market may have made the transition to a unified floating rate system easier to accomplish than otherwise might have been. In Guinea and Uganda, the secondary market represented an explicit transitional step to unification on a floating market. However, the multiple exchange rates were in a number of instances outstanding for considerable periods of time, and during that time, the exchange system was marked by distortions resulting from large implicit taxes on and subsidies to various segments of the economy.

In all programs containing provisions for floating, there was also provision for the reduction or elimination of external payments arrears during the program period. The operation of the floating exchange rate regime facilitated the management of external arrears, by making it possible to avoid new arrears because foreign exchange to settle bona fide obligations could be purchased in the market. Along with adoption of other adjustment measures, it also facilitated rescheduling and the

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<sup>1/</sup> Four of the members shown in this table did not have a Fund program at the time of, or subsequent to, the float (Bolivia, The Gambia, Lebanon, and South Africa).

<sup>2/</sup> "Review of Experience with Multiple Exchange Rate Regimes" (SM/84/64, 3/19/84), and background paper (SM/84/65, 3/20/84).

Table 3. Elements in Fund Programs on Introduction and Maintenance of Independently Floating Arrangements, January 1983-February 1986

	Date of Program	Date of Adoption of Unified Float	Treatment of Exchange Rate Policies in Program			Previous Use of Official Multiple Rate System (Introduced Under Program or as Precondition) <u>1/</u>	Length of Time Multiple Rates Maintained
			Prior Action	Performance Criterion	Objective		
Bolivia	--	August, 1985	Yes <u>2/</u>	Yes <u>2/</u>	Yes <u>2/</u>	Yes (No) <u>3/</u>	8 months
Dominican Republic	April 1985	January, 1985	Yes	No	No	Yes (No)	More than 2 years
The Gambia	--	January, 1986	Yes <u>3/</u>	...	...	No	--
Guinea	February 1986	(Not unified at present; planned for May 1986)	Yes	Yes <u>2/</u>	Yes	Yes (No)	More than 2 years
Jamaica	June 1984	November, 1983	Yes	No	No	Yes (Yes)	6 months
Lebanon	--	1952	...	...	...	No	--
Philippines	December 1984	October, 1984	Yes	No	No	No	--
South Africa	--	February, 1983	...	...	...	Yes	More than 2 years
Uganda	September 1983	June, 1984	No	Yes <u>2/</u>	Yes	Yes (Yes)	22 months
Uruguay	April 1983	Nov. 1982	No	No	No	Yes (No)	More than 2 years <u>4/</u>
Zaire	December 1983	February, 1984	No	Yes <u>5/</u> <u>2/</u>	No	Yes (Yes) <u>3/</u>	5 months
Zambia	July 1984 <u>4/</u>	October, 1985	No	No	No	No <u>3/</u>	--

1/ Reference is to market other than illegal parallel market which was present in most cases at the time of institution of the floating rates; in all cases it was a free secondary market that pre-existed.

2/ Proposed program.

3/ Program was not introduced.

4/ Dual market was de facto unified in October 1978.

5/ Retention allowance for certain receipts (de facto recognition of parallel market).

improvement of relations with creditors. In addition, the authorities found it easier to provide foreign exchange for the settlement of pre-existing payments arrears against which counterpart deposits had been lodged, because of the strengthened reserve position of the central bank. In the countries operating an auction system, the central bank set aside part of surrendered foreign exchange to service payments arrears. Payments arrears excluded from settlement in the auction market were registered with the central bank, and their settlements were arranged on a priority basis with foreign exchange which was withheld from auction. In all of the countries adopting floating arrangements, except Bolivia to date, outstanding payments arrears declined (in most cases substantially), and in three cases (Jamaica, the Philippines, and Uruguay), they were eliminated or avoided.

## II. Accompanying Measures in Members' Exchange Markets

### 1. Development of a forward exchange market

Institution of floating arrangements in the spot market may be important in setting the stage for the establishment of cover facilities that do not involve an official guarantee of an exchange rate and the attendant assumption of exchange risk and possibilities for large losses by the central bank. It may be difficult for a country to establish a forward foreign exchange market in which the exchange rate is market-determined if the spot exchange rate is fixed. One reason for this is that the judgments on the future movement of the spot rate which are an essential ingredient of a forward market become those of predicting the course of official action, and the scope for uncertainty and for abuse of inside information is therefore wide. The setting up of a forward market is, on the other hand, a difficult process that requires close monitoring and sponsorship by the central bank, in particular to ensure that adequate technical information is available to potential participants.

The development of forward exchange market facilities in the developing countries that have adopted floating spot exchange rates is at a relatively early stage. There is no such country at present that could be considered to have an organized and satisfactorily operating forward exchange market. Seven countries (Bolivia, the Dominican Republic, The Gambia, Guinea, Uganda, Zaïre, and Zambia) at this time have no concrete plans for a forward market. A very limited volume of forward transactions has been observed in Jamaica, the Philippines, and Uruguay. In Jamaica a detailed plan has been drawn up for a forward market and the system has been put in place, but there were few transactions, initially because of the inflexibility of interest rates, which made trade financing in domestic currency more attractive. In the Philippines, developments in an unorganized forward market have been subject to generalized uncertainties and few transactions take place. In South Africa, the authorities have encouraged authorized exchange dealers to make a forward market outside the Reserve Bank to the extent

possible. In order to facilitate the development of such a market, the Reserve Bank has itself continued to provide forward cover facilities to authorized dealers, but in diminishing amounts, and the official facilities are to be phased out completely by September 1986.

The exchange systems of these countries also affect the feasibility of forward transactions. Where currencies are subject to exchange controls, their delivery at future dates may be uncertain as it may be prevented by the actions of the authorities. In addition, restrictions on flows of the foreign currency, coupled with rationing of domestic credit, may make it difficult to ascertain the appropriate forward discount or premium, in that the covered interest parity condition will no longer hold with precision.

Because forward markets provide, along with adequate reserves, a means of insulating the real economy from the effects of exchange rate instability, it is important that further work be done on institutional arrangements suited to conditions in developing countries. More basic forms of forward market include one by which the central bank or commercial banks "broker" transactions, matching long and short positions at specific maturities. <sup>1/</sup> Another possibility is a forward auction market, run by the central bank. The experience gleaned from the industrial countries, particularly smaller countries, also indicates that for a country considering the institution of a "core" forward exchange market, the major benefits are likely to accrue to the introduction of shorter term facilities, primarily for trade cover. An important function of the authorities in this situation is to ensure that information is available to potential users of the market. Forward markets are typically regarded by those unfamiliar with them as complex, and simple misunderstanding may be a contributing reason for their relatively limited development.

## 2. The role of exchange and trade liberalization in floating arrangements

The demand for foreign exchange in any market is determined partly by exchange and trade restrictions on import licensing, current transactions, and capital transactions. (Surrender requirements, which affect supply rather than demand, have been considered above.) All developing countries that have adopted a floating exchange rate system have reduced restrictions to some degree, in the process of the change of regime or subsequently. Three countries, (Bolivia, The Gambia, and Uruguay), liberalized their exchange and trade systems virtually completely at or about the time that their flexible arrangements were introduced (Table 4). Thus, in Bolivia, when the auction market in foreign exchange was introduced in August 1985, the system of import

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<sup>1/</sup> The cost of transactions tends to be very small as the bank assumes no risk and therefore charges only a brokerage fee of, say, 1/4 of 1 percent of the value of the transaction.

Table 4. Floating Unitary Exchange Rate Regimes in Developing Countries: Exchange and Trade Liberalization

	Liberalization Since Float			Present Restrictions on		
	Import licensing	Current transactions	Capital transactions	Import licensing	Current transactions	Capital transactions
Bolivia	Yes	Yes	Yes	No	No	No
The Gambia	Yes	Yes	Yes	No	No	No
Dominican Republic	No	Yes	No	Yes	Yes	Yes
Guinea	Yes	Yes	Yes	Partial	Yes	Yes
Jamaica	Yes	Yes	No	Partial	Yes	Yes
Lebanon	...	...	...	Partial	No	No
Philippines	Yes	Yes	No	Yes	Yes	Yes
South Africa	Yes	No*	No*	Yes	Yes	Yes
Uganda	No	No	No	Yes	Yes	Yes
Uruguay	No	Yes	No	No	No	No
Zaire	Yes	Yes	Yes	Yes	Yes	Yes
Zambia	Yes	No	No	Yes	Yes	Yes

\* Prior to reintroduction of dual market on September 1, 1985.

licensing and control of allocation of foreign exchange for imports was ended, as were restrictions on the allocation of foreign exchange for invisible payments and capital transfers. In The Gambia, however, there have been some continuing restraints by commercial banks on customers' access to the exchange market. Countries that have switched to floating regimes have liberalized their exchange and trade systems for current payments, particularly imports; and Uruguay, which did not apply any general quantitative restrictions on imports, or restrictions on invisibles, before the floating of its currency, lowered and reformed its system of tariffs shortly after its change of exchange rate regime.

In Jamaica, Guinea, Zaïre, and Zambia, the number of goods whose imports are restricted has been reduced substantially. In Jamaica, the import licensing system was overhauled in March 1984, and most remaining licenses and quotas were eliminated ahead of schedule in April 1985, leaving 30 percent of nonbauxite, non-oil imports subject to restrictions. Zambia liberalized its import licensing system when it adopted a flexible regime, and has a plan for complete import liberalization. The liberalization of import restrictions to date has been more moderate in the Dominican Republic, the Philippines, and Uganda. In the Dominican Republic, a special exchange rate for petroleum imports was eliminated when the dual exchange markets were unified in January 1985, and two months later advance deposit requirements for imports financed under reciprocal credit agreements with Latin American central banks were halved. In the Philippines, the priority system for allocation of foreign exchange for imports was abolished when the peso was floated in October 1984, but a number of quantitative restrictions remain after the recent postponement of further derestricting measures.

Liberalization of restrictions on invisible transactions has been less intensive, by comparison with the treatment of imports following adoption of floating. Jamaica has removed its restrictions, other than maximum allowances for travel. Otherwise, apart from Bolivia, The Gambia, and Uruguay, the countries that have adopted floating have retained some degree of control, especially over the remittance of profits and dividends, the payment of commercial arrears, and travel and expatriate allowances.

Controls on outward capital transfers have been retained by the countries with floating arrangements, other than Bolivia, The Gambia, Lebanon, and Uruguay. In Jamaica, investments abroad by residents and the purchase of local assets by residents from nonresidents require exchange control approval, and this is not granted unless it can be shown that there are tangible benefits for Jamaica. Foreign exchange is not made available to residents to make cash gifts to nonresidents, and nonresidents are not normally permitted to take out security in respect of loans made to Jamaican companies owned or controlled by them, or to raise local mortgages. In the Philippines, all inward and outward capital movements, with some exceptions, are subject to the prior and

specific approval of the Central Bank. In South Africa, outward transfers of capital by residents to destinations outside the rand monetary area require the approval of the Reserve Bank. In Zaïre, with minor exceptions, transfers abroad of capital owned by residents or nonresidents are not authorized. In each of those countries maintaining restrictions, an illegal parallel market continues to exist, limiting the supply of foreign exchange and of monetary data pertinent to the management of the monetary base by the authorities.

### III. Developments Under Floating Exchange Rate Regimes

Most of the developing countries that have adopted floating exchange rates have at the same time pursued supporting monetary and fiscal policies, and have liberalized exchange and trade restrictions. Isolating the separate effects of floating is therefore a difficult task. Moreover, because the experience with flexible exchange rates in most of the countries surveyed is recent, inferences that may be drawn must necessarily be regarded as tentative, both because the full effects of flexibility take time to work through an economy and because most of the relevant macroeconomic data are preliminary. These qualifications apply with less force, however, to an examination of the effects of floating on the exchange market itself, on the variables most directly affected by the exchange rate regime. Such an analysis is also helped by the fact that data for exchange rates and certain important exchange market transactions become available with relatively short lags.

This section examines the impact of floating and the accompanying adjustment measures, first on the volatility of the exchange rate itself and on capital account transactions, and second in a broader macroeconomic context. Seven of the countries with floating systems (Bolivia, the Dominican Republic, Jamaica, the Philippines, Uganda, Uruguay, and Zaïre) have sufficient experience with floating for at least some of these questions to be addressed. For each of these countries, the volatility of the exchange rate, vis-à-vis the U.S. dollar and in nominal and real effective terms, is compared between the pre-floating and floating periods. Capital account transactions are examined using the available data from the balance of payments, cross-border bank deposits, external debt, and the extent of absorption of the parallel exchange market. Pre- and post-float developments in inflation and in output and trade are also analyzed in this section.

#### 1. Exchange market developments

##### a. Developments in bilateral and effective exchange rates

There have been concerns that floating exchange rates in developing countries would tend to be unstable because of the relative thinness of financial markets. First, there has been a fear that the institution of floating arrangements would be followed by "free fall" of the exchange rate, regardless of the stance of domestic policies, as increased uncertainty fed into the rate of domestic inflation and the two

cumulated over time. The second related concern has been that the exchange rate would prove volatile, fluctuating widely in both directions in response to external shocks in commodities markets and capital flows, internal reversible factors such as drought, and to generalized instability in domestic economic policies.

The experience has been that in all seven countries for which adequate data are available in the period in which a floating regime was maintained, the domestic currency initially depreciated in terms of the U.S. dollar (which was the intervention currency in most instances) and also in nominal and real effective terms. <sup>1/</sup> The extent of the initial depreciation in each case reflected the magnitude of exchange rate disequilibrium preceding the float and also the extent to which the market was subsequently allowed to operate freely, and within a framework provided by accompanying monetary and fiscal policies and liberalization of exchange and trade controls. Although some of these currencies subsequently appreciated, following the initial correction, all on balance depreciated over the entire period from just before introduction of floating to December 1985, against the U.S. dollar and in nominal effective terms. However, in each of the five countries for which data are available to compare the pre-float unofficial market U.S. dollar exchange rate with the official rate in the early months of floating (Bolivia, Dominican Republic, the Philippines, Uganda, and Zaïre), the domestic currency appreciated in the official market in relation to the exchange rate in the parallel market prior to the float (Chart 1).

Developments in real effective exchange rates since the initial exchange rate correction following floating have varied widely. From the month following the float to December 1985, real effective rates continued their initial depreciation in four countries, at moderate rates (less than 2 percent per month) in Jamaica, Uganda, and Zaïre, and more rapidly in Bolivia's first four months of floating. In the other three cases, the real effective rate appreciated over the corresponding periods, with small average monthly rates of appreciation of 0.1 percent in the Philippines and Uruguay, and under 2 percent in the Dominican Republic. In the case of the Philippines and Uruguay these real appreciations were not sufficient to offset the initial adjustments, but in the Dominican Republic, the real effective rate has appreciated since the institution of floating under the influence of tight monetary policies.

In order to gauge the pre- and post-float developments in exchange rate variability, four measures were calculated, each being applied to

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<sup>1/</sup> In calculating the effective exchange rate, a composite exchange rate series was used in the period preceding unified exchange float for the Dominican Republic, Jamaica, the Philippines, Uganda, and Zaïre. The weights used in these composites are the estimated values of transactions in each multiple market.

bilateral rates vis-à-vis the U.S. dollar and to nominal and real effective rates. 1/

First, with regard to bilateral rates vis-à-vis the U.S. dollar, the comparison was made for the seven currencies between the variability of the official rate prior to the float and the subsequent variability of the unified floating rate. For four of the countries examined (Jamaica, the Philippines, Uganda, and Zaïre), the trend-corrected measures (2) and (4) indicated that the variability of the floating rate in terms of the U.S. dollar was less than that of the official rate prior to the float. 2/ The Dominican peso showed an expected unambiguous increase in variability, the results for the Uruguayan peso were mixed, and for the Bolivian peso most measures indicated no significant outcome. Without trend-correction, most tests for the six countries showed increased variability in terms of the U.S. dollar. (Appendix Tables 3, 4, and 5).

Statistical tests conducted on the data for nominal and real effective exchange rates show a statistically significant reduction in the variability of five out of the seven nominal effective rates by measures (2) and (4), i.e., the measures of variability obtained with correction for trend. The outcome of the measures for the other two countries (Bolivia and Uruguay) was mixed. Without trend-adjustments--that is, on the basis of measures (1) and (3)--the evidence of a reduction in variability is less clear, as statistical tests indicate that variability declined in the Dominican Republic and Zaïre, remained virtually unchanged in Bolivia and the Philippines, and deteriorated in the remaining three countries.

The outcome of the tests for the real effective exchange rate is similar to that for the nominal effective rates. In terms of the trend-adjusted exchange rate data, which may be argued to be the more relevant of the measures employed, the variability of the real effective rate increased in the floating period only in the case of Uruguay. The data without trend-adjustment, using statistical tests for significance, indicate that the variability of the real effective exchange rate increased in the case of Jamaica and Uruguay, declined in Zaïre, and showed no statistically significant change in the remaining four countries.

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1/ The variability of the exchange rate itself was measured by:  
(1) Mean monthly absolute percentage change;  
(2) Average absolute percentage deviation from a fixed log-linear time trend;  
(3) Standard deviation of monthly absolute percentage changes; and  
(4) Standard deviation of the absolute deviations from a fitted log-linear trend.

2/ Significant at 95 percent probability level.

To sum up these results, statistical measures suggest that two-way variability (i.e., with trend correction) of exchange rates against the U.S. dollar has declined in the floating period, but that continuing adjustment of the exchange rate has been reflected in increased unidirectional changes (i.e., without trend correction). For the nominal and real effective exchange rates, based on experience to date, there is evidence that the exchange rate movements have been generally smoother than under the previous managed and fixed-rate regimes. This may be attributed to a number of factors, but especially to the support provided by monetary and fiscal policies: First, exchange markets in the floating periods have not been entirely free of central bank intervention to stabilize the rates, as described earlier. Second, reduced exchange rate volatility in the post-float periods may have reflected reduced instability at that time in overall economic conditions--for example, volatility in primary commodity prices. Third, it could be argued that exchange rates in a pegged-rate regime are especially susceptible to destabilizing speculative activity, and that they eventually require relatively large step adjustments.

b. Capital and reserve movements

Introduction of exchange rate flexibility and the accompanying liberalization of the exchange system may be expected both to affect official foreign exchange reserves and capital flows through the following channels. Floating the exchange rate removes the need for official intervention to defend the value of the domestic currency, so that reserve losses, official over-borrowing, and external payments arrears may be avoided. Private capital flows are also likely to respond positively and directly, first, to the removal of the risk of a step devaluation of the domestic currency from an unrealistic level, second, to liberalization of exchange controls on the repatriation of capital or investment income: Inward direct investment increases, the rescheduling of debt is facilitated, <sup>1/</sup> and outward capital flight is stemmed. Third, there is the role of monetary policies. Capital reflows will, of course, require domestic interest rates to be comparable with foreign rates, but even so they may not need to be as high as before the float, since they then had to compensate for expectations of devaluation.

The measurement of many of these effects is problematical. First, they may not be apparent in the data because of the simultaneous operation of other factors. For example, increased repayments of previously contracted external debt may become due at the time floating is introduced. Second, most data for short-term capital flows are unreliable under the best of circumstances, and capital flight is by its nature not directly measurable. Such activities as smuggling (of financial assets, real assets, and commodities), underinvoicing of

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<sup>1/</sup> In recent years, a number of creditors have insisted on exchange reforms as a precondition for debt rescheduling.

exports, and overinvoicing of imports are by their nature not observed by the agencies collecting balance of payments data. However, such transactions will be reflected as net errors and omissions in the balance of payments to the extent that they have recorded transactions as a counterpart. It is often assumed that the net errors and omissions provide a reasonable indicator of capital flight, although being the balancing item, they also incorporate transactions unrelated to capital flight (including valuation changes in official reserves).

In all six countries, combined net short-term capital inflows and errors and omissions have increased since floating. (Appendix Table 6.) <sup>1/</sup> The turnaround appears to have been the largest in Jamaica and Uruguay--corresponding to over 30 percent of annual imports. In the Dominican Republic, the Philippines, and Zaïre, the short-term capital reversal was somewhat smaller (of the order of 5-10 percent of imports) and it was negligible in Uganda. Other indicators of capital flight or reflow, in the form of bank deposits held abroad by nonbank domestic residents or foreign-currency denominated deposits held onshore, are inconclusive (Appendix Table 7). The accumulation of deposits abroad appears to have been stemmed after floating in the Philippines and Uganda, but to have gathered pace in the Dominican Republic, Uruguay, and Zaïre. Data on foreign currency-denominated deposits with domestic banks, which may indicate flight out of the domestic currency or reflow, although not a balance of payments item, are available only for Uruguay and Zaïre. Foreign currency-denominated deposits fell in both Uruguay and Zaïre during the floating period.

Movements in gross official international reserves indicate that the need to intervene in the foreign exchange market did indeed diminish with floating, as would be expected. Reserves increased in all countries except Uganda, where the level remained unchanged; the increases in a number of instances were targeted under Fund programs. The data for Uganda are explained by the fact that the authorities have intervened quite heavily to support the level of the exchange rate for sustained periods. As regards the other elements of official financing "below the line," external payments arrears have declined to date in all countries except Bolivia following the introduction of floating.

c. Absorption of black exchange markets

In those countries in which exchange and trade controls have been liberalized, the illegal parallel market has been absorbed, or its scope much reduced. In Bolivia, although purchasers are not required to specify their reasons for obtaining foreign exchange in the auction market, there has been from time to time after floating a thriving

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<sup>1/</sup> Data for identified short-term capital flows (i.e., as distinct from errors and omissions which are generally believed to represent disguised capital flows) are available for only three of the six countries, and for only one country (the Philippines) in 1985.

unofficial parallel market operated by exchange houses and by some banks, as well as by individuals transacting for themselves or for others as agents. There are three explanations for the continued existence of the parallel market in Bolivia. First, bids in the official market are required to be the equivalent of US\$5,000 or a multiple thereof. Second, obtaining funds in the official market may be seen as a cumbersome process. Third, some dealers in illicit commodities prefer to operate totally outside the official sphere. With complete derestriction of the exchange and trade systems, however, arbitrage has generally functioned to ensure the same rate for legal transactions. Available information suggests that there is no black market in the Dominican Republic, the Philippines, and Uruguay, which maintain relatively liberal exchange and trade regimes, nor in Jamaica.

In Zaïre, the spread between parallel market rates and the official exchange rate has also narrowed considerably after unification and floating, to no more than 12 percent--the peak reached in January 1984. Transactions in the parallel market are related primarily to tax evasion and smuggling.

In Uganda and Zambia, which have the least liberalized restrictive systems of the group of countries surveyed here, incentives for widespread parallel market transactions have remained considerable. Following the unification of the market in Uganda, the scope for illegal transactions narrowed considerably when the auction system was operating effectively. However, the premium in the black market generally remained about 30 percent above the auction determined exchange rate, because only current transactions, including debt servicing, were permitted to be effected through the auction market and there was demand for foreign exchange for capital flight. The spread has since widened substantially with the de facto fixing of the rate (to a factor of 2.7:1 in November 1985), as the unofficial market began once again to play an important role. According to available information, a sizable discount remains also in the newly formed auction market in Zambia, although it has been substantially less than the discount in the pre-float period.

## 2. Macroeconomic performance

### a. Output and trade

The impact on economic growth of an initial depreciation resulting from the floating of the exchange rate does not, in principle, vary from the impact from exchange rate changes which occur under other flexible exchange rate regimes, and depends critically on the support provided by demand management and supply policies. The six countries with floating exchange rates during Fund programs that are surveyed in this section have all suffered from serious balance of payments problems and overabsorption. Floating the exchange rate in conjunction with adoption of appropriate adjustment policies may therefore have an initial contractionary impact on growth, which may be partly offset by improved

financing arrangements with creditors, while in the medium term growth would be assisted. A real effective depreciation has an immediate negative impact on domestic absorption as it reduces real wealth through its impact on the price level and real income, unless wages fully accommodate the impact of the depreciation. However, the effects of the real effective depreciation in switching expenditures toward more competitive industries are ultimately growth enhancing. <sup>1/</sup> The role of macroeconomic policies in supporting the floating exchange rate systems is crucial, and differences in performance should not be attributed to the system per se but rather to the real effective exchange rate adjustment that took place and the full package of measures of which the adoption of the float is a part. The experience of these six countries is too short to gauge the growth and balance of payments responses because of the usual lags involved in the supply response to the change in relative prices. Moreover, the pertinent question is how these countries would have performed in the absence of floating and the associated Fund program, which, by its nature, is not directly measurable. Also, as noted earlier, balance of payments developments cannot be attributed solely to exchange rate movements. However, in general, floating exchange rates appear to have contributed to favorable and envisaged macroeconomic effects or have contained a further deterioration in the external position.

In most of the six countries adopting floating exchange rate arrangements, there has been a sharp contraction of imports, reflecting the combined result of the change in relative prices, the monetary and fiscal adjustment measures, and continuing use of import controls (Appendix Table 8). On the supply side, the real effective depreciation that has ensued may be expected to promote exports and import substitution through the change in relative prices. In addition, the real effective depreciation might increase exports recorded in national output figures, as smuggled exports are replaced by exports through customs. However, the countries under review have suffered from structural problems as a result of their exports being concentrated in relatively few commodities that have been subject to both excess world market supply and to protectionist measures (e.g. bauxite/aluminum, meat, sugar, and wool products), and diversification of exports has also been handicapped by the delayed effects of an unrealistic exchange rate. Although exports of traditional commodities have been made more profitable in those countries in which floating has led to a real effective depreciation of the exchange rate, the stimulus has primarily been to nontraditional exports and services, which have expanded from a small base. Exports appear to have performed positively following the real effective depreciation of the currencies and the package of economic measures which preceded or followed floating in the Dominican

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<sup>1/</sup> For a discussion of the transmission mechanisms of exchange rate adjustment, see Mohsin S. Khan and Malcolm D. Knight, "Fund-Supported Adjustment Programs and Economic Growth," IMF Occasional Paper No. 41, November 1985.

Republic, Uganda and Zaïre, while they have performed disappointingly in Jamaica, the Philippines, and Uruguay. In the Dominican Republic, the depreciation of the currency which preceded floating has primarily stimulated nontraditional exports and tourism, while in Uganda both traditional exports (mainly coffee) and nontraditional exports were boosted. In Uganda and Zaïre, part of the increase in recorded exports since floating has been due to a shift from the unofficial to the official sector. On the other hand, Uruguayan exports have expanded hardly at all, despite the substantial depreciation of the peso since floating in November 1982, owing to problems facing traditional trading partners in Latin America and in the Middle East, and to protectionist practices in industrial country markets. Nevertheless, there has been some diversification into nontraditional export commodities and increased repatriation of foreign exchange earnings. Overall export performance has been similarly disappointing in Jamaica, in the face of a substantial real depreciation of the currency, largely because of delayed effects on the profitability of major exports (bauxite and alumina) that led to shutdowns in the industry. Political uncertainties have also recently dampened tourism receipts, following an initial stimulus. However, some positive effects have been evident in much stronger performance of nontraditional exports. In the Philippines, the peso appreciated initially after the float under the influence of tighter monetary conditions, contributing to a contraction of exports in 1985, although services receipts have showed some buoyancy as a result of a shift of transactions from the black market to the official market.

Imports have declined substantially in the Dominican Republic, Jamaica, the Philippines and Uruguay as a result of the domestic recession as well as, with the exception of the Philippines, the change in relative prices following the depreciation. There has been some evidence of import substitution of domestic products for imported products. In Zaïre, imports had been constrained by the lack of foreign exchange before floating. As a result, after floating and the liberalization of foreign exchange restrictions, imports have increased moderately in volume terms, despite the substantial depreciation. Further, in all cases, the flow of imports was affected by the availability of financing and as part of the adjustment program.

Data for external current account balances show that the deficit (as a ratio of GDP) declined in Jamaica, the Philippines, Uganda and Uruguay, with the largest reductions occurring in the Philippines and Uruguay (Chart 2). The current account deficit remained stable during Fund programs in the Dominican Republic and Zaïre. The trade balance has accounted for the major part of the improvement in the current balance of payments in Jamaica, and the Philippines, although the service and transfer balances have also made a positive contribution in the Philippines. By contrast, the service and transfer balance accounted for the larger part of the improvement in the Dominican Republic and in Uganda. The improvement in trade balances has primarily reflected the declines in imports discussed above.

b. Inflation effects

The impact on the rate of inflation of a switch to floating has depended crucially on the monetary and fiscal economic policies that have influenced the subsequent direction of the exchange rate changes. Domestic price liberalization has also constituted an important policy measure supplementing the floating of exchange rates in most cases, owing to extensive price controls (e.g. on agricultural and energy products) or price distortions resulting from public sector pricing policies that were in place. In most of these countries, the freeing of the exchange rate was accompanied by complete or partial removal of price controls and adjustments of public sector prices. Although the immediate impact of price liberalization has been an increase in prices, in the longer run this impact may be more than mitigated by an improvement in resource allocation resulting from correct price signals to enterprises and consumers reflecting the opportunity cost of the goods affected as well as by the stimulus to domestic production (e.g. the effect of appropriate grain pricing on agriculture).

Liberalization of price controls has taken place in Bolivia, The Gambia, the Philippines, South Africa, Uganda, and Zaïre shortly before or after the introduction of floating exchange rates. In Bolivia and the Philippines, all remaining price controls on consumer goods were removed--these had previously affected more than 40 percent of consumer goods in Bolivia <sup>1/</sup> and ten important consumer items, mainly food products, in the Philippines. Prices for all consumer goods except petroleum products and public sector tariffs were liberalized in Uganda. In the Dominican Republic, The Gambia, Guinea, Jamaica, Zaïre, and Zambia, floating of the exchange rate was accompanied by increases in administered and controlled prices, especially petroleum prices and public sector tariffs, to reflect the exchange rate adjustment. Moreover, in the Dominican Republic, The Gambia, Zaïre, and Zambia, the authorities committed themselves to adjusting administered prices in line with changes in costs more frequently and extensively than in the past.

Four of the countries for which sufficient post-float data is available (the Dominican Republic, Jamaica, the Philippines, and Zaïre) experienced a decline in the rate of inflation after an initial surge following the float (Chart 3). However, inflation has decelerated to a rate below the pre-float level only in the Philippines and Zaïre. The decline in inflation in Zaïre, from a 12-month increase peaking at 123 percent toward end-1983 to about 10-15 percent a year, was particularly striking. It resulted from the sharp tightening of monetary and fiscal policies that occurred at the same time that

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<sup>1/</sup> Price controls had not been successfully enforced in Bolivia.

economic growth recovered. Recently, inflation has picked up again somewhat because of a relaxation of monetary policy. In the Dominican Republic, the decline in inflation reflected mainly the very tight stance of monetary and fiscal policies maintained during 1985.

Uganda is a good example of a country in which domestic prices at the consumer level had already reflected the black market exchange rate prior to floating. <sup>1/</sup> The gradual depreciation of the official rate and transfer of transactions to the parallel market up to mid-1984 therefore had no visible impact on the rate of inflation. The subsequent surge of inflation from mid-1984, when the exchange markets were unified, was in response to a relaxation of fiscal policy in connection with a sharp increase in wages and salaries of civil servants, which was followed in turn by a marked increase in credit to the public sector and the rate of monetary expansion.

In Uruguay, in the immediate aftermath of the floating of the exchange rate, there was a 40 percent depreciation of the peso and the rate of inflation picked up considerably. Prior to floating, exchange rate policy had been deliberately used to dampen the rate of inflation at a time when there was a marked weakening in financial policies. The authorities' initial attempts at adjustment following the floating were complicated by the large losses that began to be incurred by the Central Bank mainly as a result of its portfolio purchase scheme to shore up the domestic banking system. More recently, however, fiscal and monetary policies have been considerably tightened with a view to bringing down inflation from the relatively high rates of the past three years.

c. Comparison of performance under floating  
with managed flexibility

As noted earlier, in the arrangements from the Fund that were concluded between January 1983 and December 1985, the major alternative to floating exchange rate arrangements was managed flexibility aimed at maintaining or increasing competitiveness by reference to a real effective exchange rate indicator. A comparison between the macro-economic developments under these two groups of arrangements is shown in Table 5. It must be stressed that any differences in performance are the combined result of exchange rate developments, external events, and domestic policies. Moreover, the sample of countries with adequate data on the experience with floating exchange rates (6 countries with 9 programs) is considerably smaller than that of countries with the managed arrangements (26 countries with 36 programs).

The comparisons show that the external current account balance either improved or remained unchanged during the program year in all

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<sup>1/</sup> This effect is directly observable in data for several specific consumer goods comparing post-float prices in Uganda and Zaire with the same goods in Sierra Leone (Appendix Table 9).

Table 5. Comparison between Performance of Countries with Independently Floating and Managed Flexible Exchange Arrangements under Fund Programs compared to Year before the Program

(In percent of countries in either group of countries)

	<u>External 1/</u> <u>Current Account Balance</u>		<u>Overall 1/</u> <u>Fiscal Balance</u>	
	<u>Floating</u>	<u>Flexible</u>	<u>Floating</u>	<u>Flexible</u>
Improvement	67	67	67	50
Unchanged	33	17	22	31
Deterioration	<u>—</u>	<u>17</u>	<u>11</u>	<u>19</u>
	100	100	100	100
	<u>Broad Money 2/</u>		<u>Prices 2/</u>	
	<u>Floating</u>	<u>Flexible</u>	<u>Floating</u>	<u>Flexible</u>
Deceleration	56	44	56	28
Unchanged	--	14	11	11
Acceleration	<u>44</u>	<u>42</u>	<u>33</u>	<u>61</u>
	100	100	100	100
	<u>Exchange and Trade System 3/</u>			
	<u>Floating</u>		<u>Flexible</u>	
Liberalization	56		46	
Unchanged	33		46	
Intensification	<u>11</u>		<u>8</u>	
	100		100	

1/ Any change in the external current accounts or overall fiscal balances in excess of 0.5 percent of GDP is considered an improvement or deterioration in the balance (See Appendix Table 10 for data).

2/ Any increase (decrease) in the rate of inflation or growth of broad money above 10 percent of the rate is considered acceleration (deceleration) in the magnitudes.

3/ Based on an overall evaluation of the restrictiveness of the exchange and trade system during the program year.

countries with floating exchange rates, while it worsened in one fifth of those countries with managed flexible exchange arrangements. <sup>1/</sup> The difference in these outcomes was probably attributable to fiscal performance, as the overall fiscal balance improved in two thirds of the countries with floating arrangements compared to only half of the countries with flexible rates. However, measured in terms of the size of changes in relation to GDP, the median improvement was larger for the managed arrangements.

The inflation performance, measured as the change in the 12-month average increase in consumer prices before and after the approval of the Fund program (or latest available information), was better in countries with floating arrangements than in those with flexible exchange rates. There were 11 countries in the latter group which undertook a depreciation of their currencies at the beginning of the program. However, there was no difference in the inflation performance of the flexible exchange rate countries which initially depreciated their currencies and those which did not. With respect to monetary policy, no significant difference is apparent between the floating and managed flexible exchange arrangements. The liberalization of the exchange and trade systems was more extensive under floating than under flexible exchange arrangements, which might have contributed to differences in the inflation record.

#### IV. Summary

The experience with flexible exchange arrangements in the specific form of floating exchange rates in developing countries since the advent of generalized floating by industrial countries in 1973 is relatively limited, although in recent years an increasing number of developing country members have adopted such systems. The early experience indicates that floating exchange rate systems can function satisfactorily in developing countries with relatively diverse economic structures, despite the limited depth of their financial systems. However, they have to be adapted to the institutional strengths and weaknesses of the individual countries. Most particularly, these freely floating exchange market arrangements have to be supported by the sustained pursuit of appropriate domestic economic policies to ensure their efficient operation over time. Such arrangements are often also the only alternative to restrictions, arrears and controls to insulate the balance of payments from domestic economic mismanagement. However, from an efficiency viewpoint, it must be stressed that a floating exchange rate cannot substitute for appropriate economic policies.

Developing countries have adopted floating rates for a variety of reasons, but most did so because of severe balance of payments difficulties that had resulted in external payments arrears. In fact, flexible exchange rate arrangements, including the floating exchange

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<sup>1/</sup> For definitions of these movements, see footnote 1 in Table 5.

rate systems on which this report has focused, may be the realistic option for members with severe balance of payments difficulties reflected in low official reserves and persistence of arrears, and insufficient room for maneuver in domestic policies. In a number of the countries, protracted balance of payments problems had previously been addressed by extensive controls on foreign exchange transactions that had led to disintermediation. A major aim of the market-determined floating arrangements has therefore been to bring back into the official sector the extensive illegal parallel markets in which exchange rates were substantially depreciated, as well as to encourage the repatriation of capital flight which, in a number of cases, had become a major problem. Another reason for the introduction of market-related floating in several instances was the desire on the part of the authorities to shift the determination of the exchange rate from the authorities to market forces. With the rate determined in an open market, the authorities were better able to focus decision-making on other areas of economic management.

Arrangements that were in effect before the adoption of market floating ranged from a managed float in which the exchange rate in relation to the intervention currency was changed frequently in an attempt to counteract the effects on competitiveness of rapid domestic inflation, to relatively fixed exchange rate arrangements against a major currency. In many cases, arrangements in effect before free market floating also have included multiple exchange rates. In some of these instances, the introduction of the freely floating market for exchange rate determination involved transitionally the existence of a secondary market for certain transactions in which the rate was freely determined, followed by a progressive transfer of transactions to that market until complete unification of the markets was effected. Typically, where this approach was taken in the context of a Fund-supported program, it was understood that the rates would be unified within a relatively short period of time.

An important choice facing a developing country in instituting a floating exchange market is whether it should take the form of an auction or an interbank market. The experience to date has been that markets operated by the commercial banking sector have been less subject than officially operated auction markets to destabilizing intervention in the form of inappropriate official purchases and sales or ad hoc controls on access to the market. In addition, it has been possible in using interbank markets to build on the existing expertise of banks and foreign exchange dealers operating in formal or informal parallel markets. Interbank markets also function on a continuous basis while auctions are periodic by their nature and therefore less efficient as clearing mechanisms. The less frequent are the auctions (they are conducted daily in only one country), the less efficient and smooth will be the clearing process, as delays in obtaining foreign exchange will be longer and uncertainty and risk involved in the exchange transaction will be greater, the longer the interval between supply to the central bank and the actual auction itself. Interbank market arrangements have

been the more common setting for freely floating exchange rates in developing countries to date; seven developing countries have adopted interbank arrangements and five auctions arrangements. In these and other instances, the Fund has assisted in formulating the systems by transferring experience among members concerning the design and implementation of specific market modalities.

A major consideration in setting up the floating markets has been the need to incorporate safeguards against destabilizing speculation and the establishment of monopoly positions. In several instances, limits have been put on the foreign exchange positions of commercial banks and other dealers, both to ensure that the market is not "cornered," and to limit excessive exposure to exchange risk. The limits have generally been set with reference to norms derived from experience in the management of foreign exchange working balances. Freedom of entry into the exchange market has been an important factor in ensuring its competitive operation, particularly where the number of commercial banks is small.

Under auction arrangements where foreign exchange must be surrendered to the central bank, often the volume of foreign exchange transactions in the market has been sharply diminished as a result of the accumulation of reserves at the market-determined rate or "extra market" allocations of foreign exchange by the central bank. These latter are largely for official uses or for the reduction of external arrears, (including payments for external debt obligations). In some countries, the exchange requirements of public enterprises have been met outside the auction, and retention privileges have been granted to private sector concerns, also with the aim of guaranteeing the availability of foreign exchange. As a result of the setting aside of foreign exchange for these purposes, the proportion of foreign exchange receipts accruing to the economy as a whole that has actually been auctioned by the central bank has been as low as one quarter. This has created problems for the effective functioning of the market and for the provision of sufficient exchange for orderly discharge of current import demands.

Steps to introduce forward exchange markets have also been taken by a few countries with floating spot markets. Forward market cover is important in developing countries to facilitate external financing, and to insulate the productive sector from some of the effects of market volatility. However, the development of forward exchange market facilities in these developing countries is at a relatively early stage, with only a very limited volume of forward transactions. Further work is needed to determine institutional arrangements suited to conditions in developing countries--including possible brokering arrangements by the central bank or more limited forward market arrangements for short-term facilities, primarily for trade cover.

In most cases, floating exchange rate systems have been introduced with Fund assistance in formulating technical aspects, as part of Fund

supported adjustment programs. In fact, in several instances, the implementation of the floating system was one of the first steps taken in such programs and set the stage for the formulation of the underlying macro-economic framework and other supporting policies. Although it can be argued that such a sequence could in principle lead to an early "overshooting" of the rate and subsequent reversal of the initial depreciation, in practice this has not been the case. On the other hand, the new realism in the exchange rate policies in the countries adopting floating rates has helped to create a more favorable climate for comprehensive adjustments to domestic policies as well as for discussions with foreign donors and creditors, particularly in the period leading up to discussions on debt rescheduling. It is, of course, critically important for the effective functioning of a floating market exchange rate that it be supported by effective implementation of appropriate policies of demand restraint and structural change and by increased external resource inflows especially of a kind that can be readily fed into the exchange market. In several instances, to assist in providing as stable an environment as possible for the introduction of floating, and with the aim of minimizing the initial depreciation of the floating rate, arrangements have been made for "bridging" finance from donor countries or commercial banks ahead of Fund drawings under a stand-by arrangement and rescheduling of existing external obligations.

Successful operation of an exchange rate float will be helped by strengthened confidence in the economy and more particularly in its external payments outlook. In this context, the outlook for increased foreign exchange receipts and current and capital accounts will be critical. Usually the measured effects of the initial depreciation associated with floating on the output of tradable goods (exports and import substitutes) have been subject to lags, but the absorption of black market inflows and the incentives created for reducing capital flight have led to some relatively early significant beneficial effects on the capital account. The curbing of capital flight, and the encouragement of greater repatriation of foreign exchange earnings and capital reflow have, in fact, been a major aim of some authorities in adopting floating systems. This implies, for countries where the onset of balance of payments difficulties seems imminent--as often indicated by a rising premium on foreign exchange in the parallel market and foreign exchange cash flow problems, that the adoption of a floating rate may serve to prevent the difficulties intensifying into an actual accumulation of arrears.

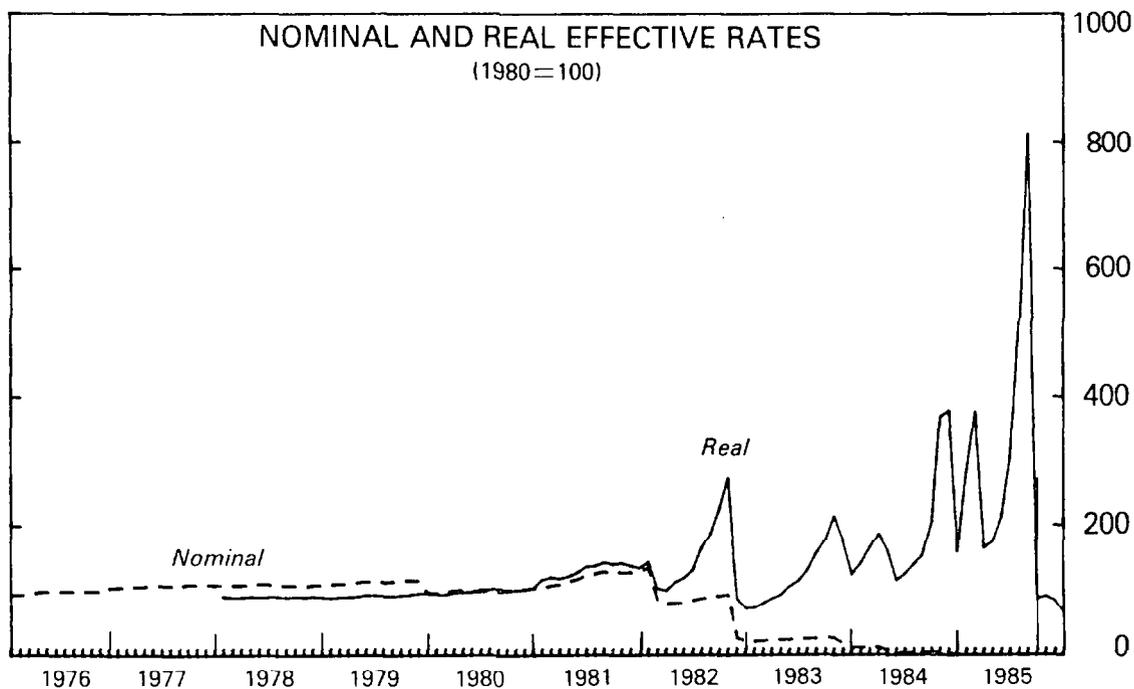
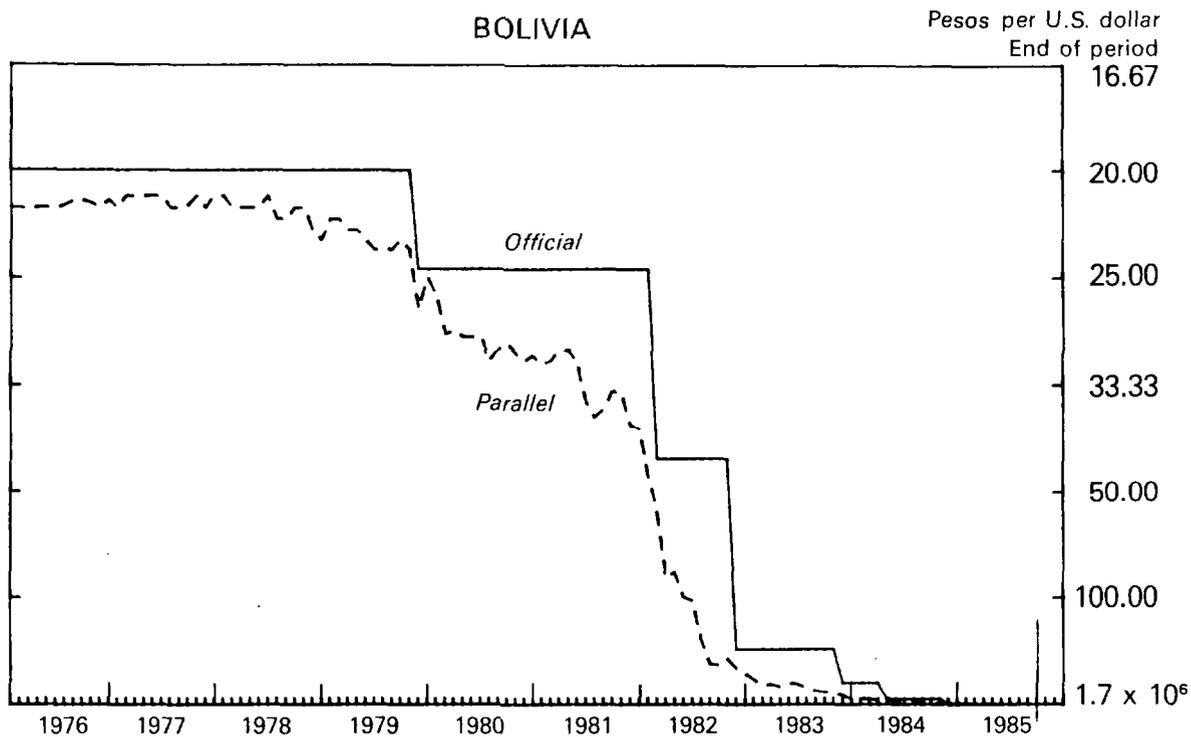
However, to the extent that exchange controls are retained following the exchange market reform, incentives will remain for evasion through, for example, underinvoicing of export receipts and overinvoicing of goods and services imports. In fact, most members adopting floating rates have substantially liberalized their exchange and trade systems, and from available data on capital flows it seems that liberalization and floating have led to decreased capital flight in all surveyed countries, and to some short-term reflow. However, the data on which these observations are based are yet weak. In addition, given the

prolonged balance of payments problems experienced by the countries adopting floating systems, confidence is understandably slow to rebuild. It requires a perception that the adjustment policies are likely to be lasting and that there are an increased resource availability and an improved external balance. The lack of such confidence has probably limited the extent of the capital reflows observable to date. In any event, the adoption of floating exchange rate systems should normally take place in the context of a broad program of exchange and trade liberalization, which has been the case with those members that have introduced such systems to date.

A concern that has been voiced about the adoption of floating exchange rate systems by developing countries--at least before the more extensive use of such regimes in recent years--is that they could lead to "free fall" of the exchange rate, thereby contributing to a cumulation of inflationary forces. Another concern has been that floating rates would be relatively unstable because of the limited depth of financial markets. Such concerns, however, are misplaced in that they attribute the "free fall" or the instability of the exchange rate to the particular modality of exchange rate determination and overlook the critical relationship between developments in market-determined exchange rates and the quality of domestic economic policies. Indeed, the evidence surveyed in the paper, covering between one and three years' experience in the individual countries, does not appear to support these concerns. In one or two countries, the domestic currency has actually appreciated after floating, partly in response to the effect of higher domestic interest rates in generating net capital inflows. In other countries, the official exchange rate has depreciated sharply with the introduction of floating, but in these cases the black market exchange rate prior to the action appears to have provided a floor for the initial movement. Subsequently, the rate has tended to move over time generally in accordance with relative inflation rates. Further, the two-way volatility of exchange rates to date in countries adopting floating rate systems has in most instances been less than that prior to floating, especially in terms of the real effective exchange rate.

As might have been expected, the correction of the exchange rate following floating has led to price level increases through cost-push effects. The rise in the inflation rate, however, has been considerably less than implied directly by the share of imports and the magnitude of the depreciation. Two reasons may be adduced for this. First, the cost-push effect has not to a degree been accommodated by monetary policies, and second, many prices at the consumer level had already adjusted to reflect the shortage of exchange for imported goods reflected in the black market exchange rate. To a large degree then, the price corrections were confined to the official sector and to goods subject to official price controls--notably, imported foodstuffs and oil. Following the initial surge corresponding to the exchange rate correction and the freeing of controlled domestic prices, in many of the countries both exchange rate movements and inflation have tended to recede rather than gain momentum.

CHART 1  
FLOATING EXCHANGE REGIMES:  
EXCHANGE RATE DEVELOPMENTS IN SELECTED COUNTRIES,  
January 1976 - December 1985<sup>1</sup>



Sources: National authorities; International Currency Analysis, Inc., *1984 World Currency Yearbook*; and staff.

<sup>1</sup>Increases in the charts represent appreciation of the domestic currency; while slashes indicate the month of floating of exchange rates.

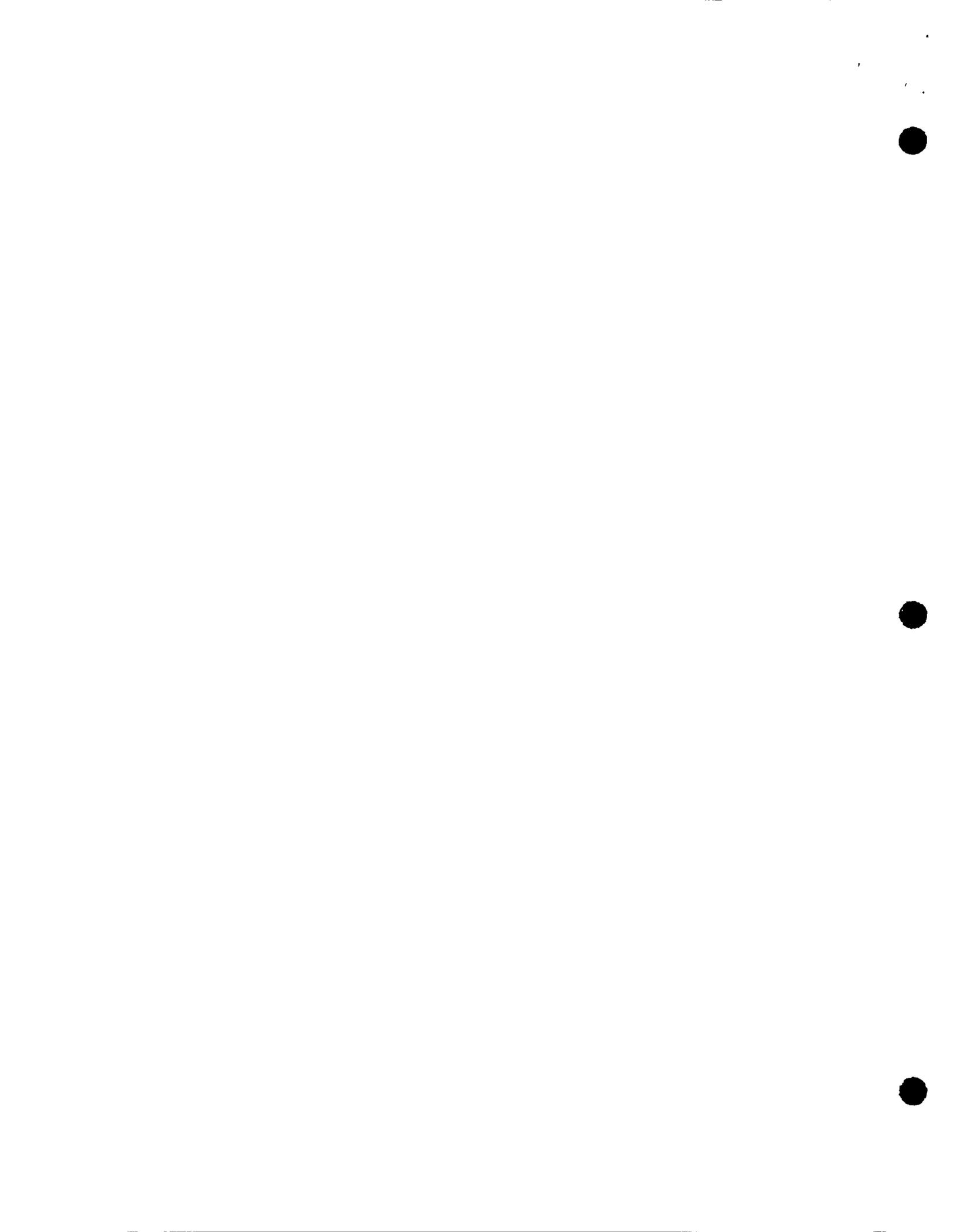
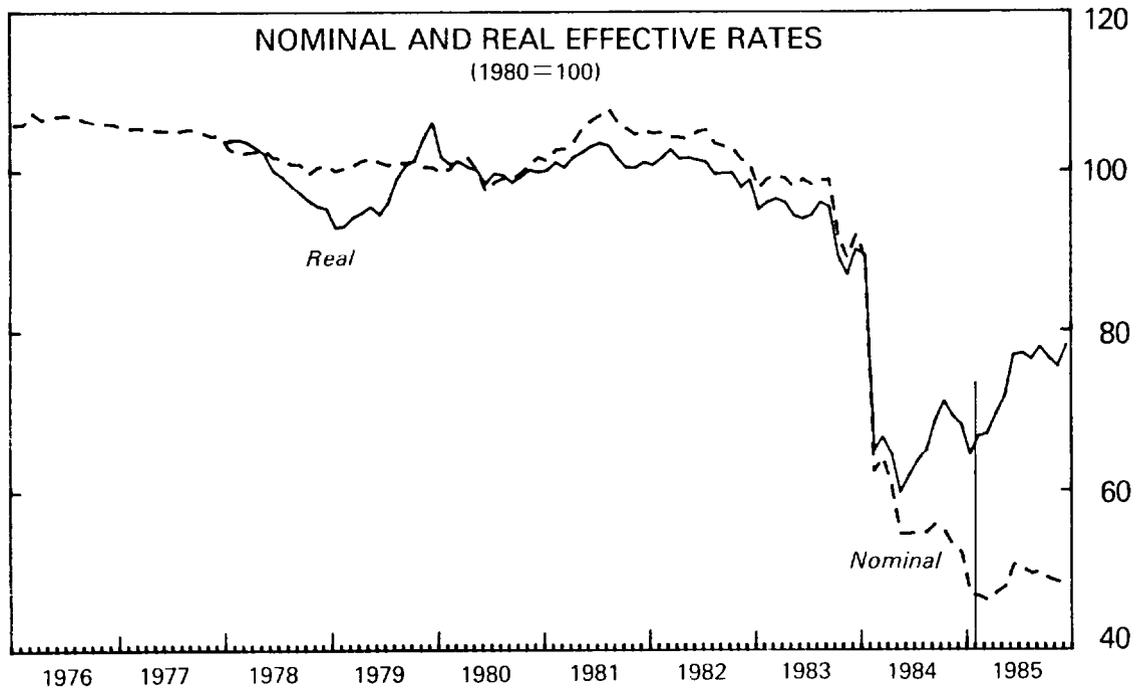
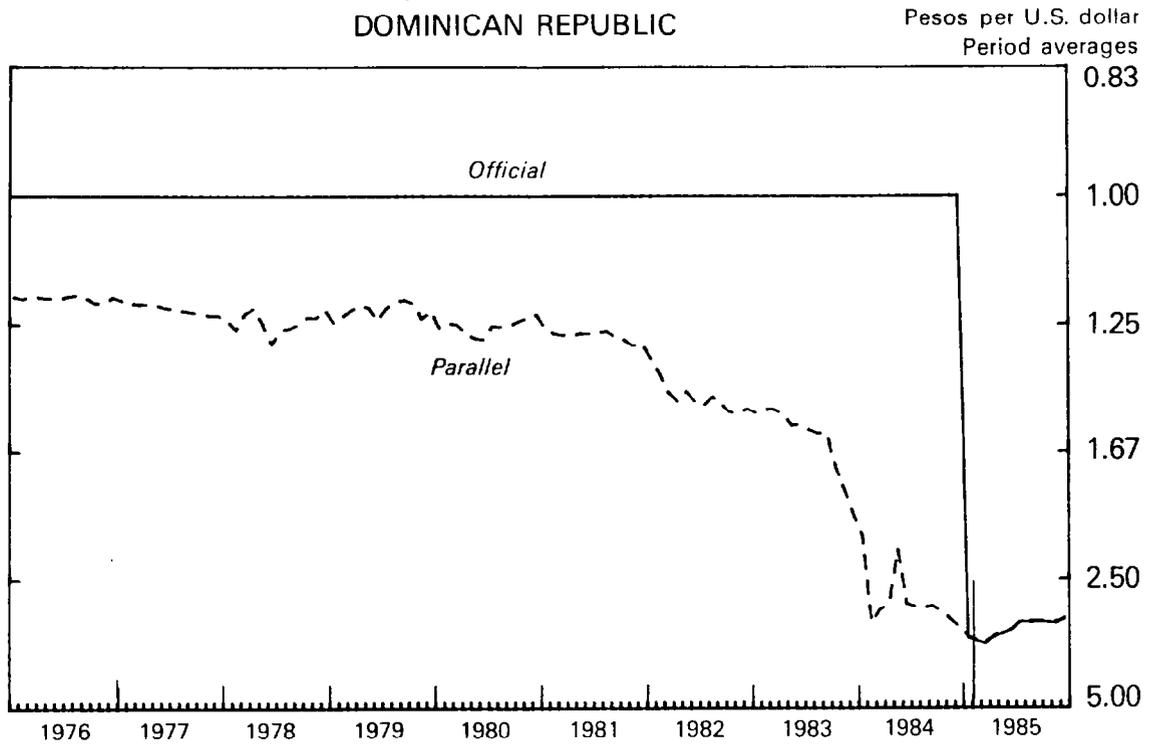


CHART 1 (Continued)  
**FLOATING EXCHANGE REGIMES:**  
EXCHANGE RATE DEVELOPMENTS IN SELECTED COUNTRIES,  
January 1976 - December 1985<sup>1</sup>  
DOMINICAN REPUBLIC

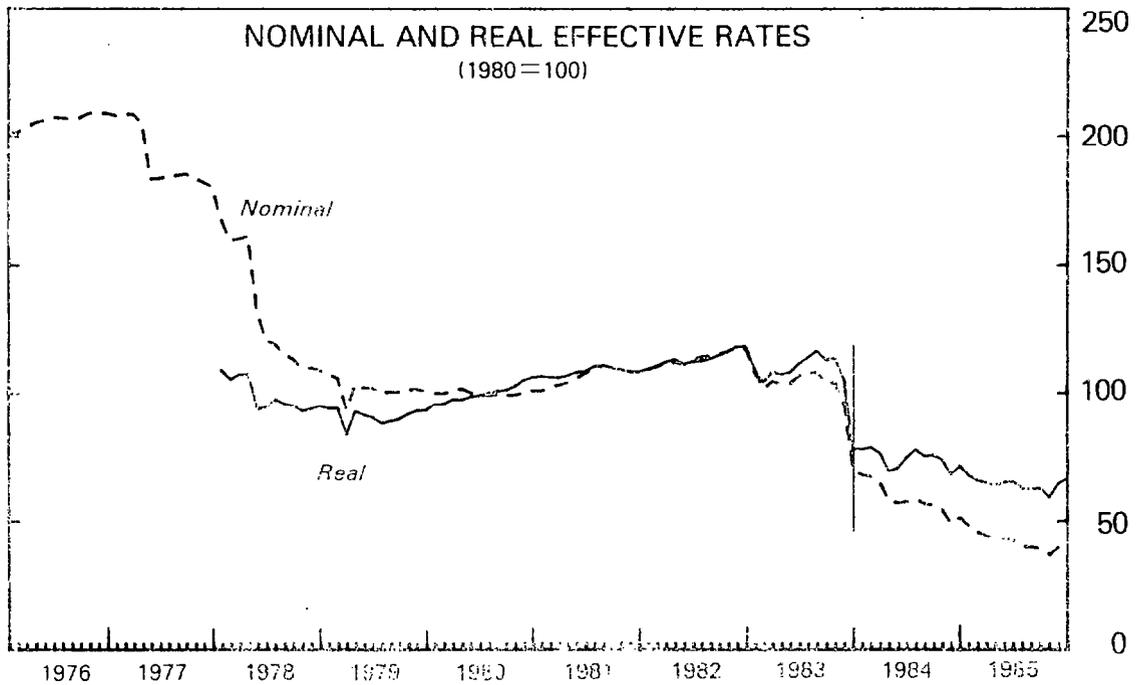
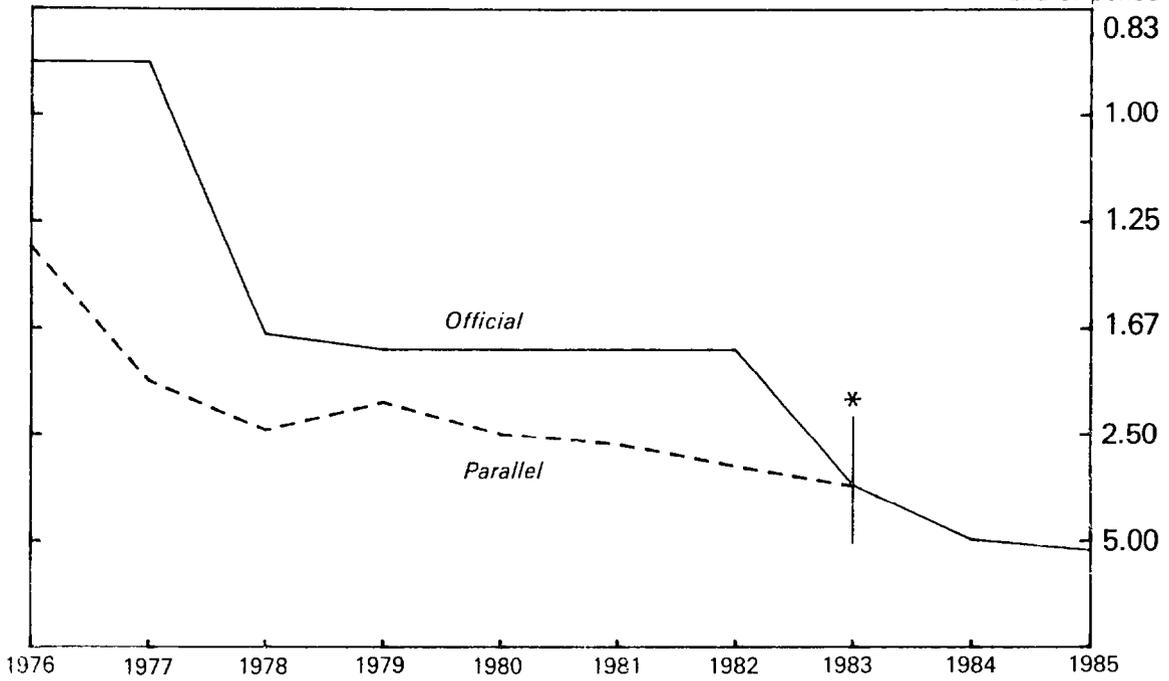


<sup>1</sup>Increases in the charts represent appreciation of the domestic currency; while slashes indicate the month of floating of exchange rates.



CHART 1 (Continued)  
**FLOATING EXCHANGE REGIMES:**  
EXCHANGE RATE DEVELOPMENTS IN SELECTED COUNTRIES,  
January 1976 - December 1985<sup>1</sup>  
JAMAICA

Jamaican dollars per U.S. dollar  
End of period

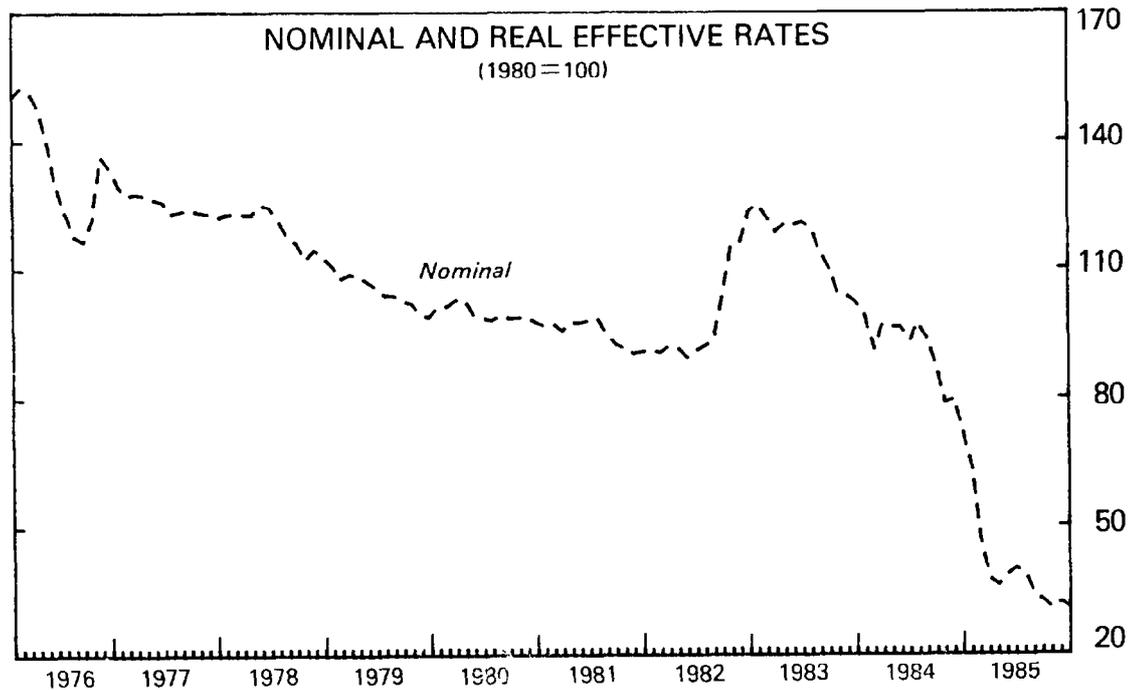
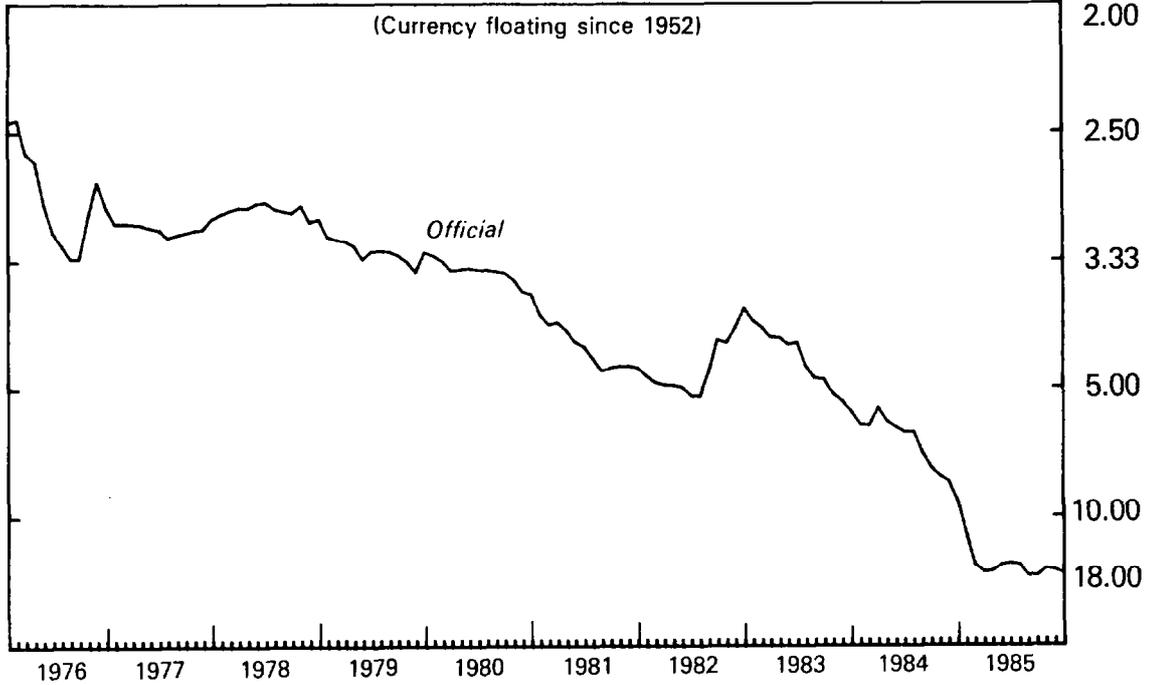


<sup>1</sup> Increases in the charts represent appreciation of the domestic currency; with slashes indicate the months of floating of exchange rates.  
<sup>2</sup> December 1983



CHART 1 (Continued)  
**FLOATING EXCHANGE REGIMES:**  
EXCHANGE RATE DEVELOPMENTS IN SELECTED COUNTRIES,  
January 1976 - December 1985<sup>1</sup>  
**LEBANON**

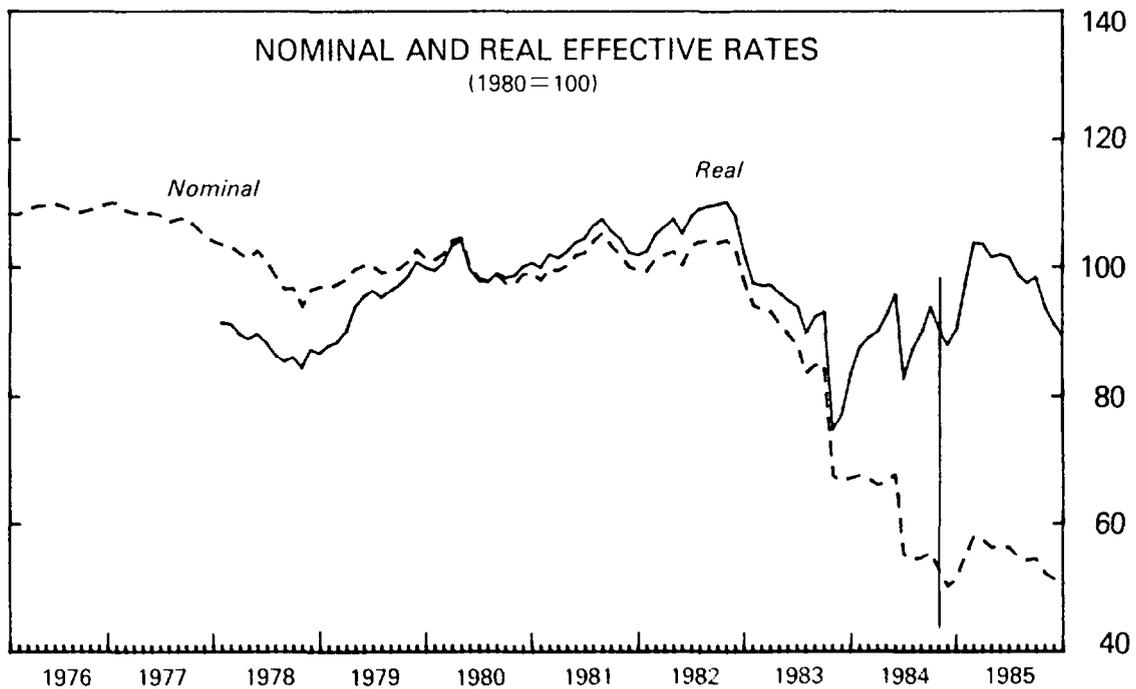
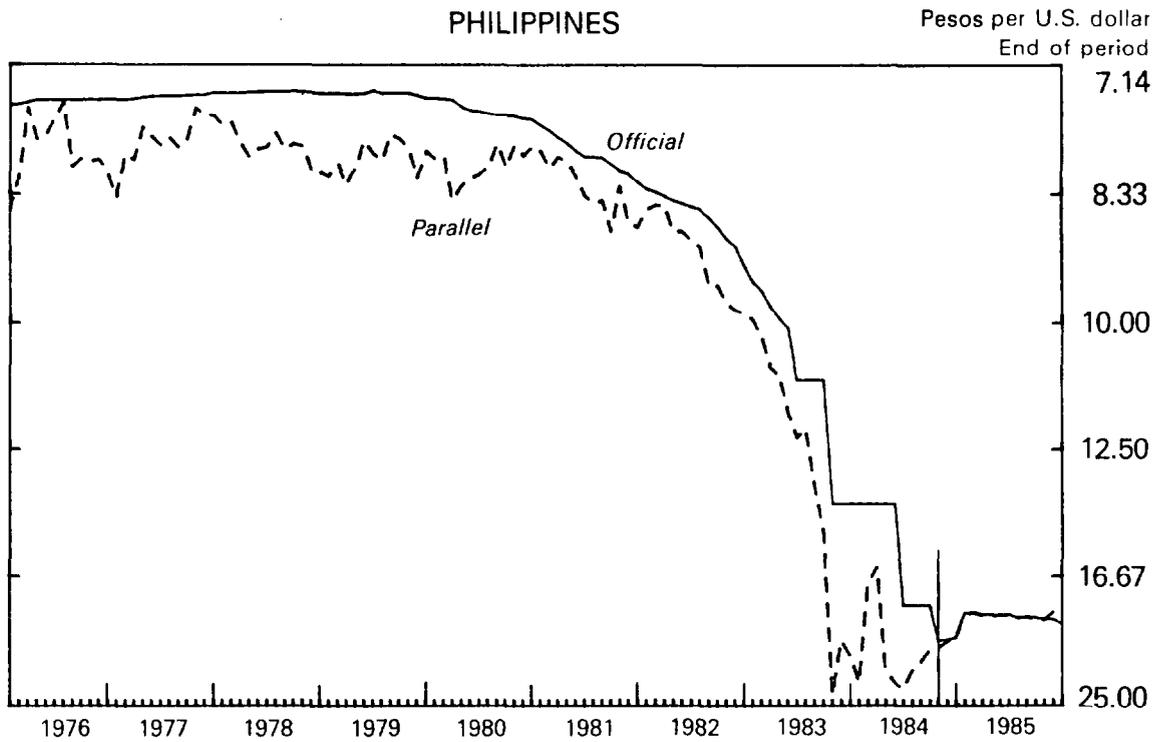
Pounds per U.S. dollar  
End of period



<sup>1</sup>Increases in the charts represent appreciation of the domestic currency; white slashes indicate the month of floating of exchange rates.



CHART 1 (Continued)  
**FLOATING EXCHANGE REGIMES:**  
EXCHANGE RATE DEVELOPMENTS IN SELECTED COUNTRIES,  
January 1976 - December 1985<sup>1</sup>  
**PHILIPPINES**

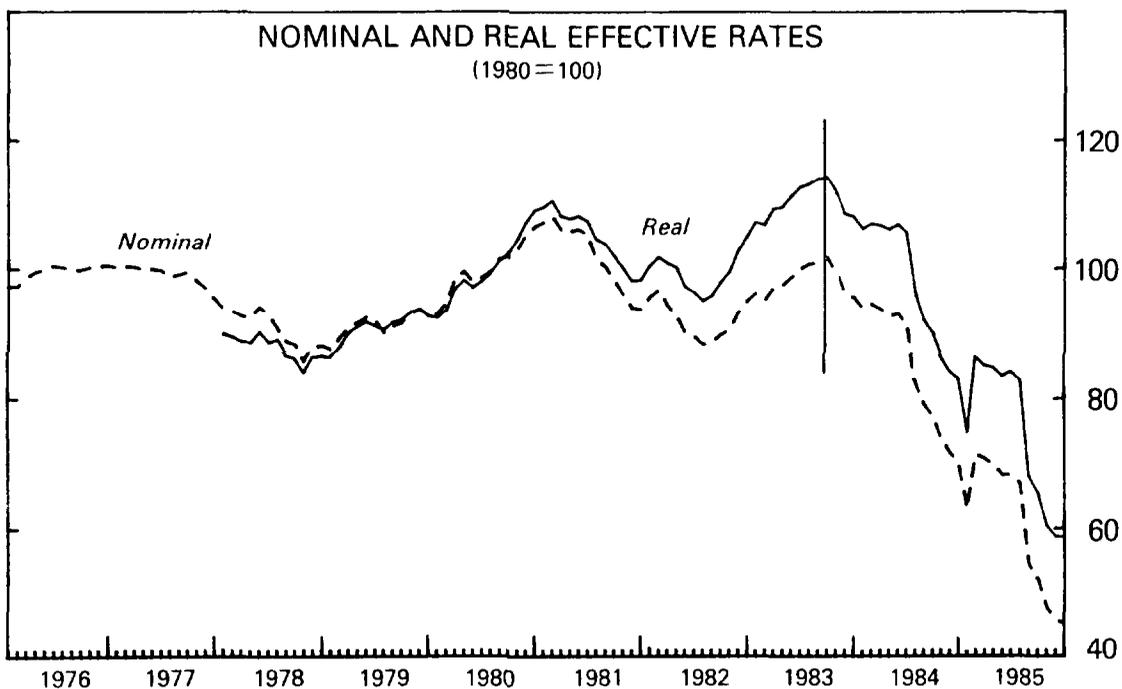
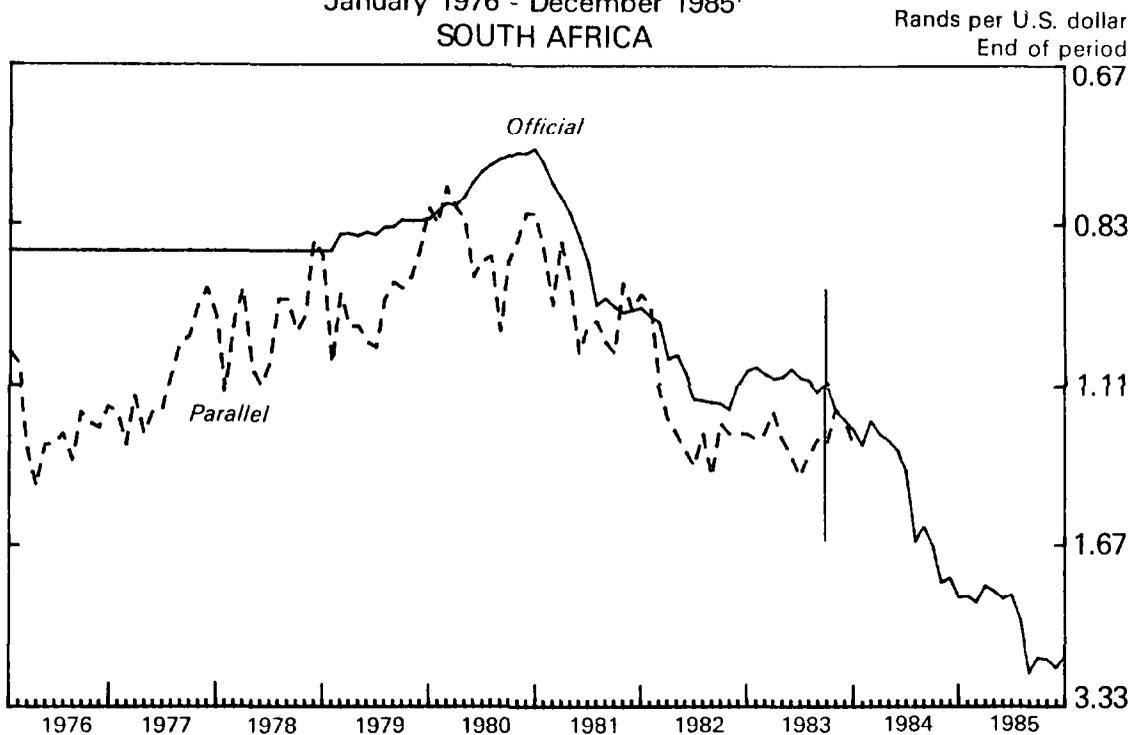


<sup>1</sup> Increases in the charts represent appreciation of the domestic currency; while slashes indicate the month of floating of exchange rates.



CHART 1 (Continued)

### FLOATING EXCHANGE REGIMES: EXCHANGE RATE DEVELOPMENTS IN SELECTED COUNTRIES, January 1976 - December 1985<sup>1</sup> SOUTH AFRICA



<sup>1</sup>Increases in the charts represent appreciation of the domestic currency; while slashes indicate the month of floating of exchange rates.



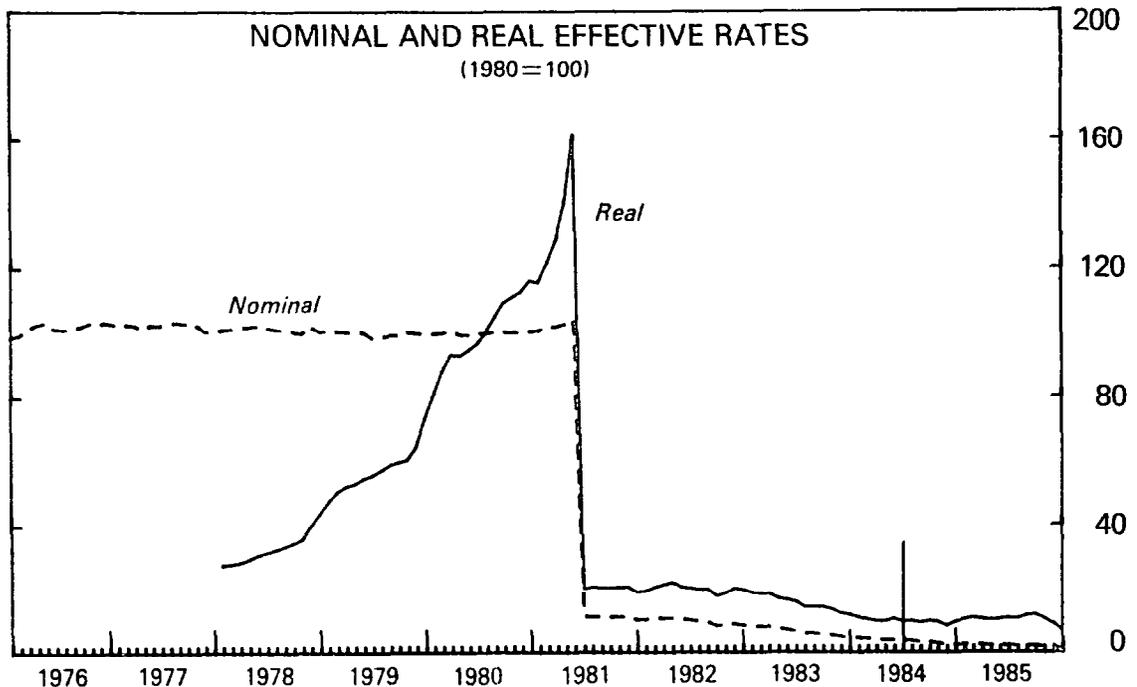
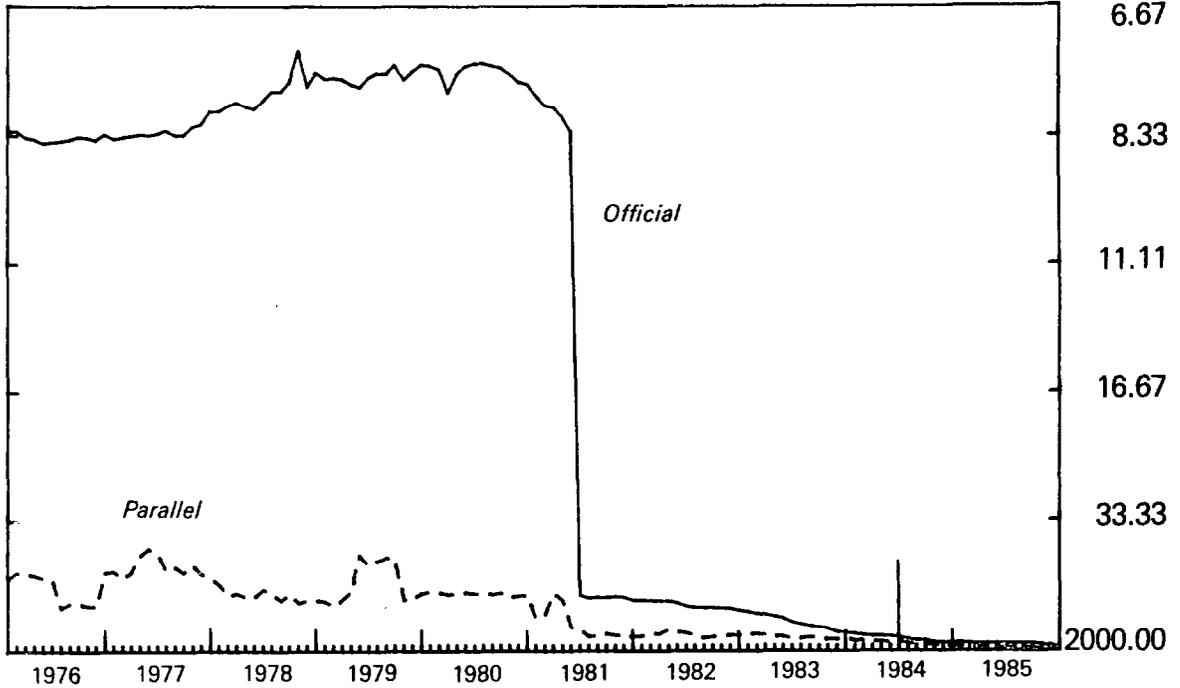
CHART 1 (Continued)

### FLOATING EXCHANGE REGIMES: EXCHANGE RATE DEVELOPMENTS IN SELECTED COUNTRIES,

January 1976 - December 1985<sup>1</sup>

UGANDA

Shillings per U.S. dollar  
End of period  
6.67

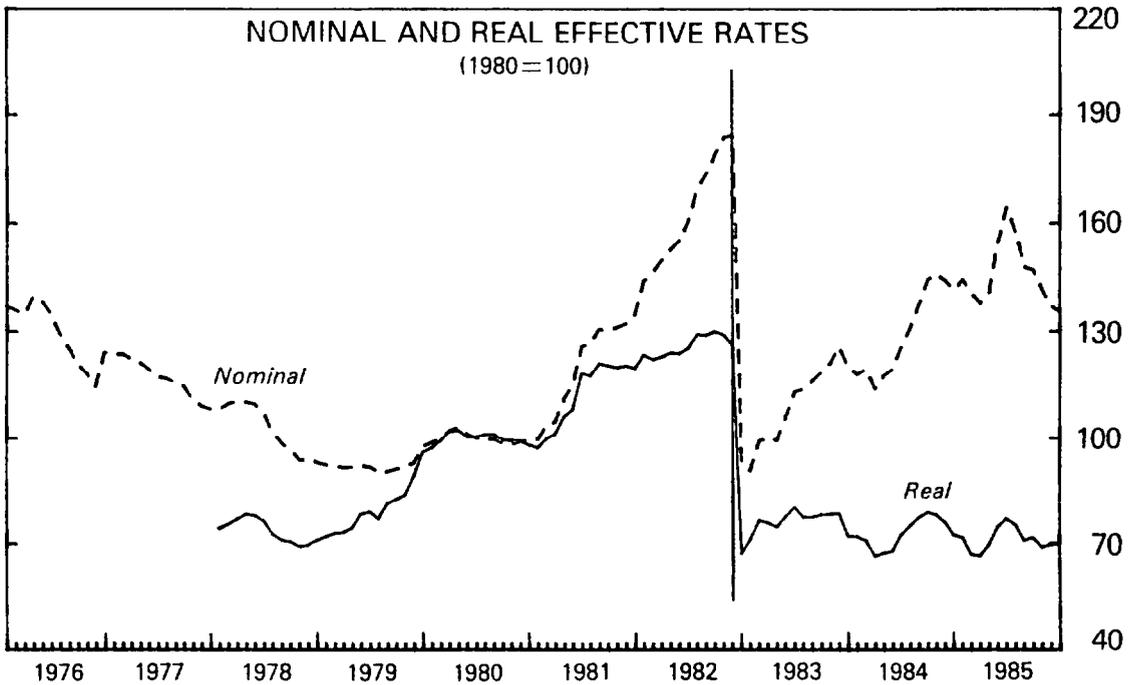
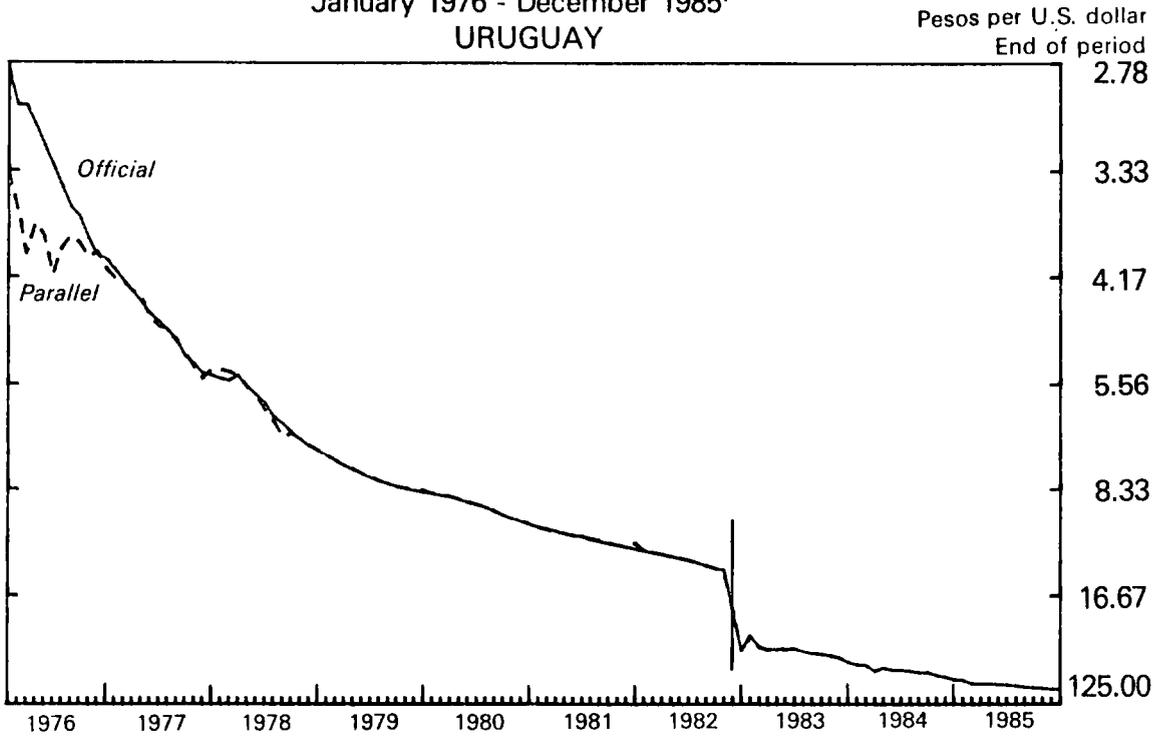


<sup>1</sup>Increases in the charts represent appreciation of the domestic currency; while slashes indicate the month of floating of exchange rates.



CHART 1 (Continued)

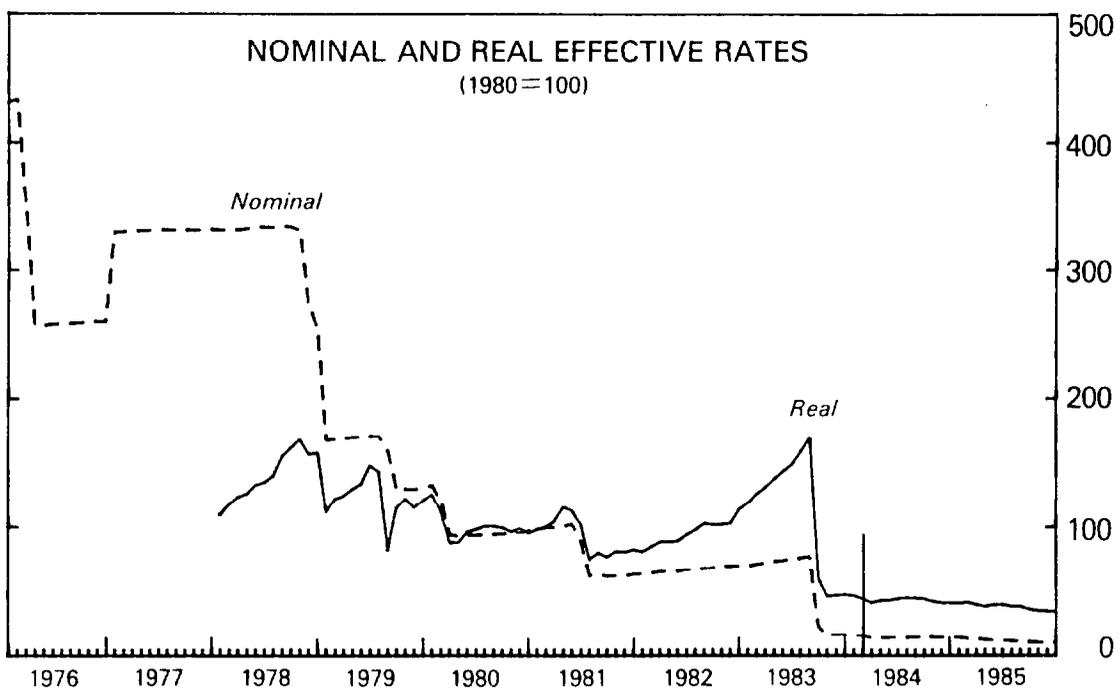
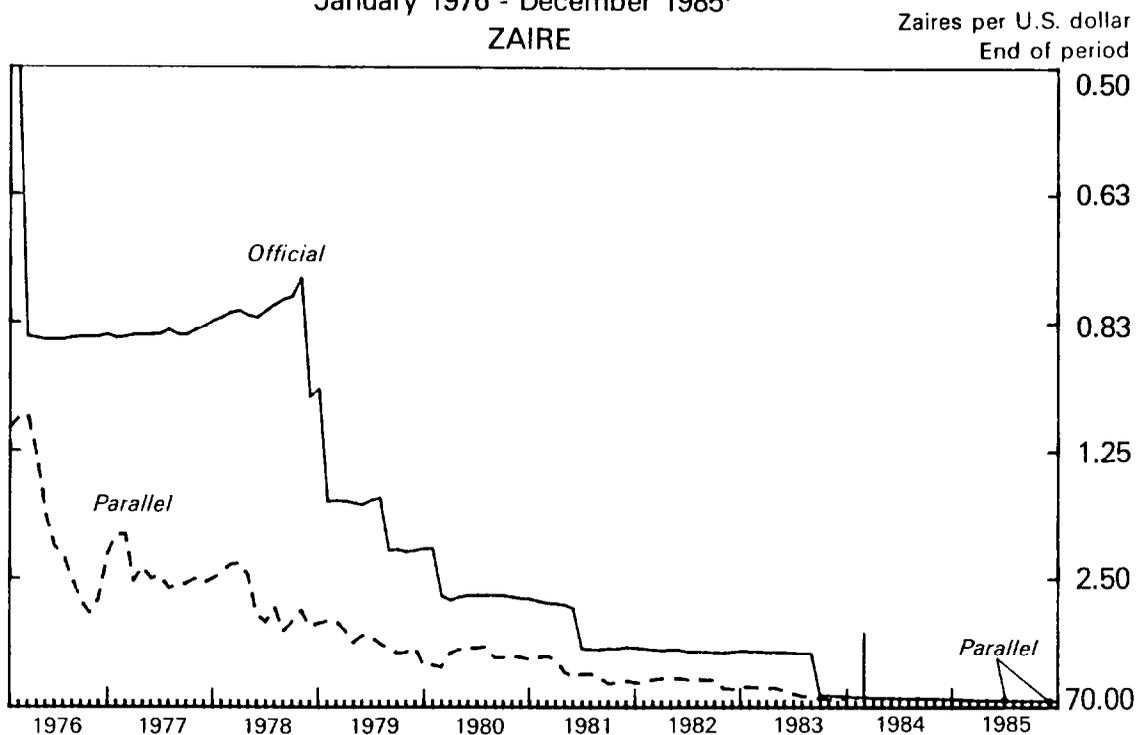
**FLOATING EXCHANGE REGIMES:**  
EXCHANGE RATE DEVELOPMENTS IN SELECTED COUNTRIES,  
January 1976 - December 1985<sup>1</sup>  
URUGUAY



<sup>1</sup>Increases in the charts represent appreciation of the domestic currency; while slashes indicate the month of floating of exchange rates.



CHART 1 (Continued)  
**FLOATING EXCHANGE REGIMES:**  
EXCHANGE RATE DEVELOPMENTS IN SELECTED COUNTRIES,  
January 1976 - December 1985<sup>1</sup>



<sup>1</sup> Increases in the charts represent appreciation of the domestic currency; while slashes indicate the month of floating of exchange rates.



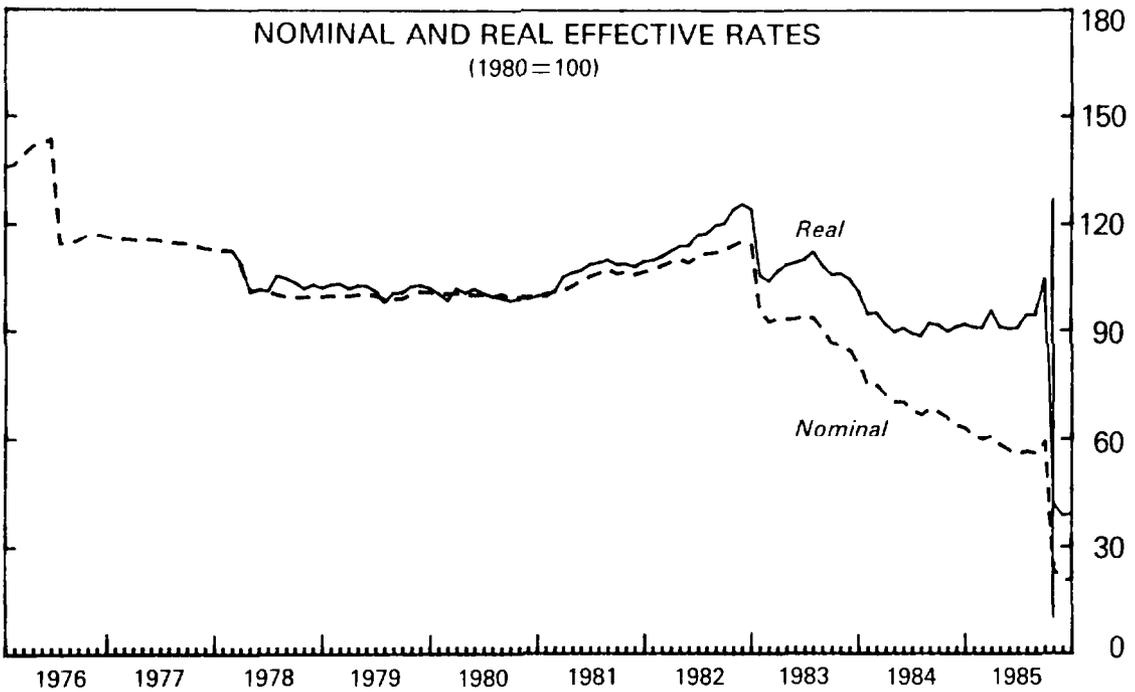
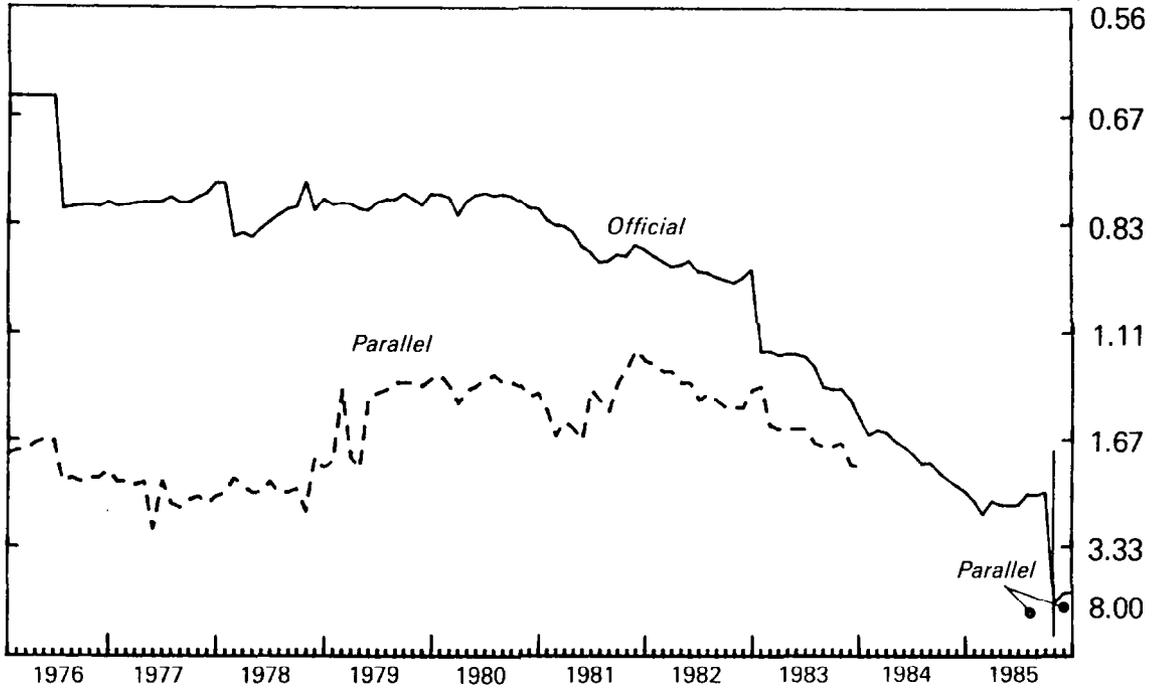
CHART 1 (Concluded)

# FLOATING EXCHANGE REGIMES: EXCHANGE RATE DEVELOPMENTS IN SELECTED COUNTRIES,

January 1976 - December 1985<sup>1</sup>

ZAMBIA

Kwachas per U.S. dollar  
End of period



<sup>1</sup>Increases in the charts represent appreciation of the domestic currency; while slashes indicate the month of floating of exchange rates.

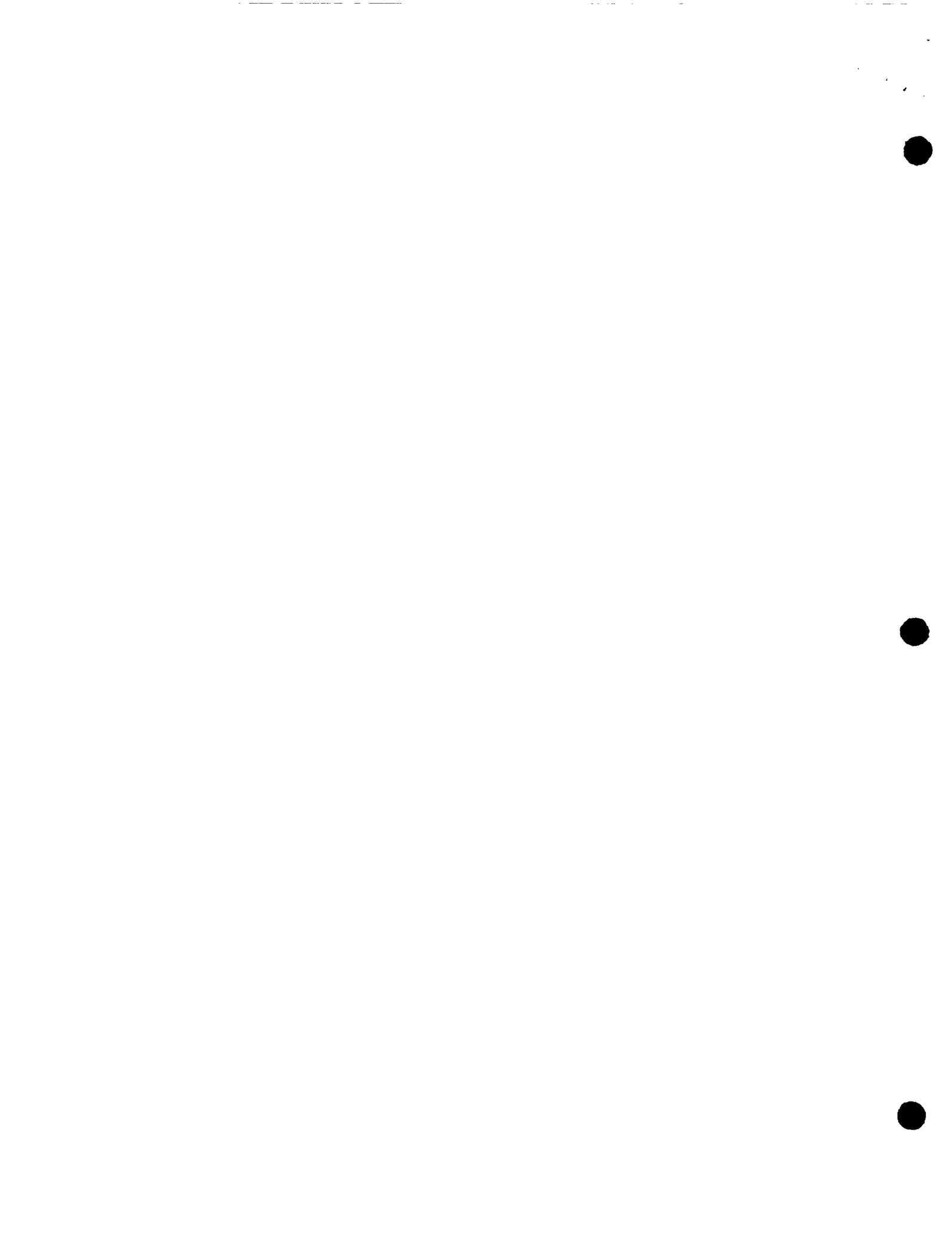
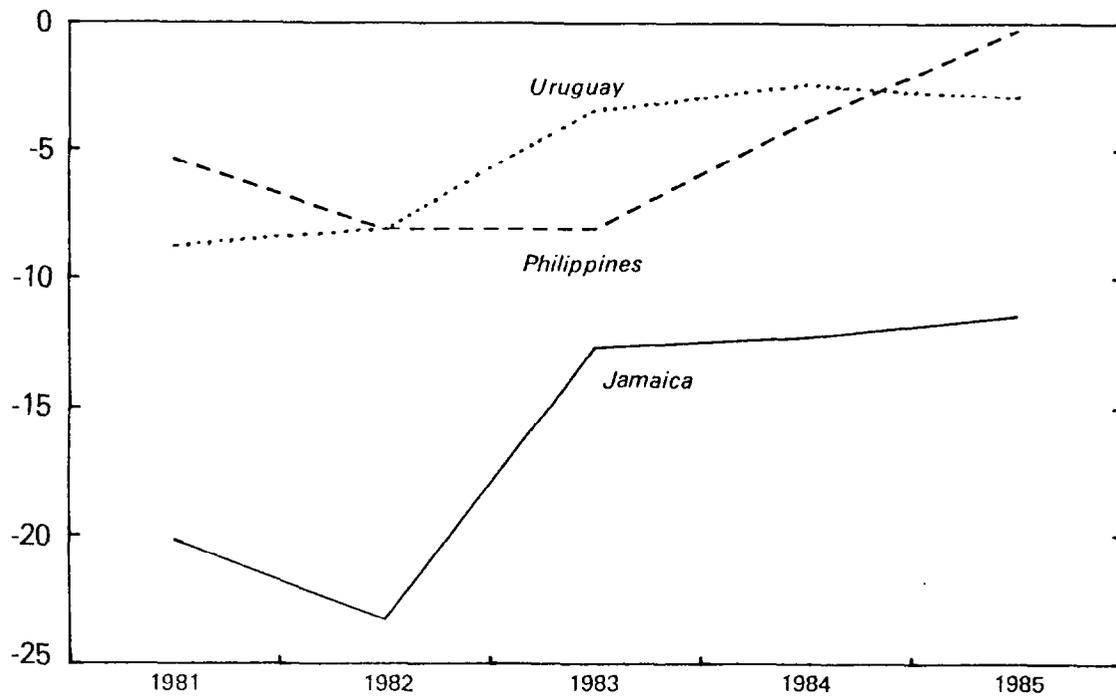
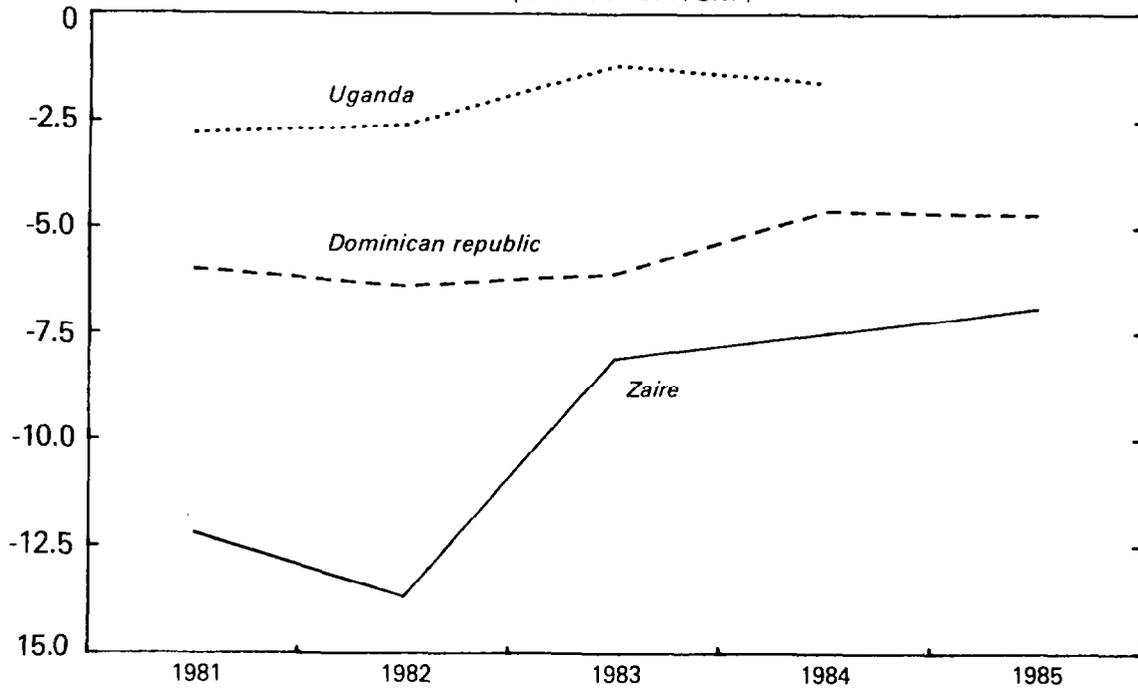


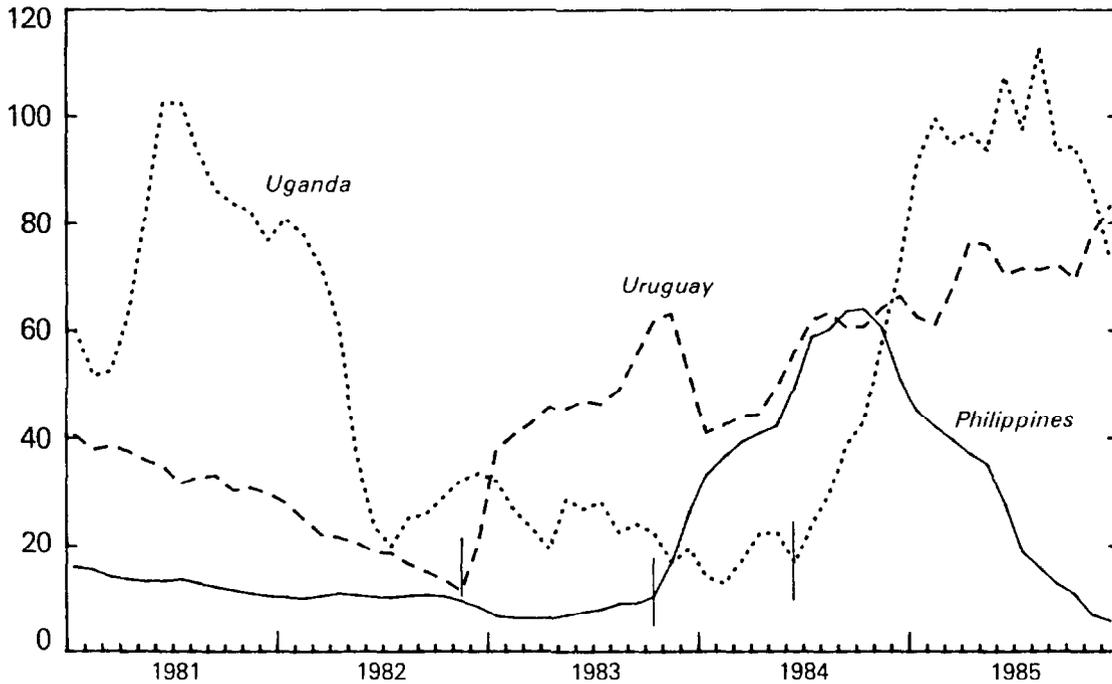
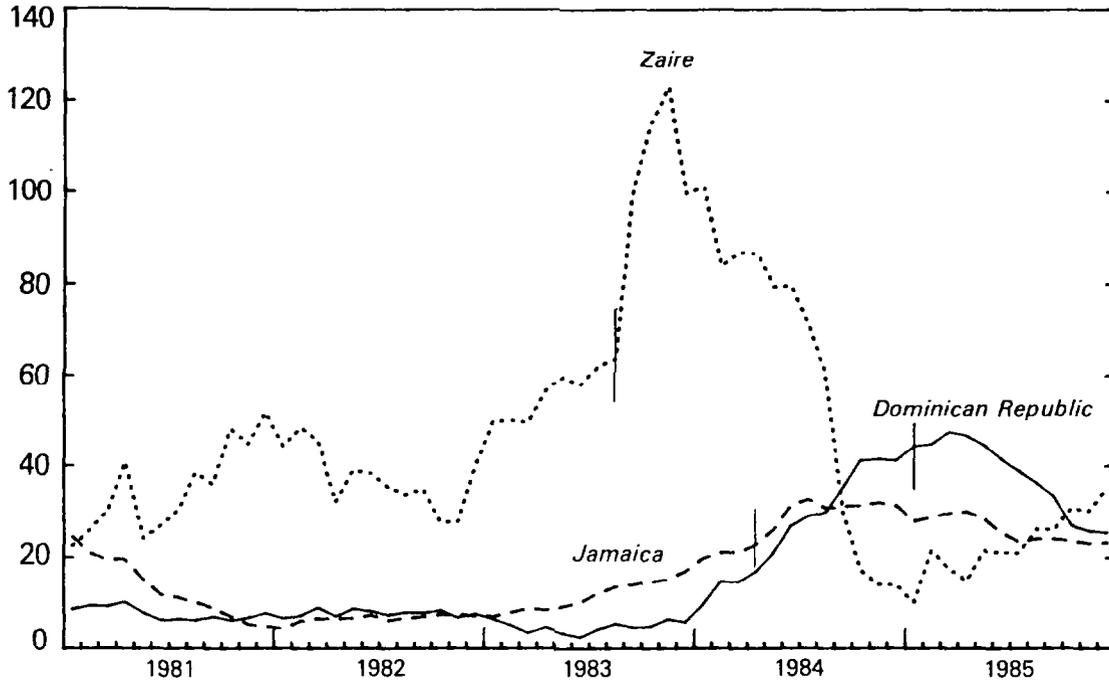
CHART 2  
EXTERNAL CURRENT ACCOUNT DEVELOPMENTS  
(In percent of GDP/GNP)



Source: Fund papers.



CHART 3  
CONSUMER PRICE DEVELOPMENTS  
(Percentage change; 12 month increase in consumer prices)<sup>1</sup>



Source: IMF, *International Financial Statistics*.  
<sup>1</sup>Slash in chart indicates the beginning of floating of exchange rates.



Table 1. Selected Indicators of Economic Structure, 1984

	Per Capital GDP (US \$)		Ratio of money plus quasi-money to GDP <u>1/</u>	Ratio of total trade in goods and nonfactor services to GDP <u>1/</u>	Ratio of imports of goods and nonfactor services to GDP <u>1/</u>	Ratio of manufactures to total imports	Ratio of manufactures to total exports	Exports concentration <u>2/</u>	Imports concentration <u>2/</u>	
	At official exchange rate	At parallel exchange rate								
	<u>In percent</u>									
Bolivia	1,305.0 (1,251.1) <u>4/</u>	384.3 (368.4) <u>4/</u>	20.4	16.9	7.5	40.6 <u>3/</u>	--	Metals (46.1) and gas (49.4)	Raw materials and intermediate goods (51.1), capital goods (37.9) and consumption goods (9.8)	
Dominican Republic	1,797.7 (1,744.0)	656.7 (637.1)	26.0	53.4 <u>5/</u>	28.4 <u>5/</u>	51.0 <u>6/</u>	68.9	Raw sugar (31.5), ferronickel (12.4) and gold alloy (14.0)	Fuels (40.4), consumer goods (27.9), intermediate goods (21.4), and capital goods (10.3)	
Gambia, The <u>7/</u>	237.4	118.7	20.9	106.2 <u>8/</u>	64.5 <u>9/</u>	37.6	--	Groundnut products (32.1) and fish and fish products (3.1)	Manufactures (37.6), food and live animals (35.3), and mineral fuels (14.1)	
Guinea	357.0	21.5	35.0 <u>10/</u>	51.0 <u>8/</u>	27.3 <u>9/</u>	...	--	Bauxite (76.7) and alumina (21.7)	...	
Jamaica	1080.0	...	38.2	126.2	65.6	26.1 <u>3/</u>	26.0	Bauxite and alumina (65.2), manufactures (26.0) and agricultural goods (2.8)	Raw materials (32.4) fuels (29.5) and capital and durable consumer goods (26.1)	
Lebanon <u>11/</u>	1,646.4 (2,100.1)	1,646.4 (2,100.1)	314.4	102.3 <u>12/</u>	84.5 <u>13/</u>	...	39.0 <u>14/</u>	Agricultural products, foodstuffs, and beverages (31.0)	...	
Philippines	613.8 (601.4)	609.9 (597.5)	20.1	63.8	34.9	18.9 <u>15/</u>	24.6 <u>16/</u>	Electronics (24.6), coconut oil (10.8) and sugar (4.6)	Raw materials and intermediate goods (43.4), mineral fuels and lubricants (27.2) and capital goods (18.9)	
South Africa	2,320.0	...	38.6	56.3 <u>17/</u>	29.0 <u>17/</u>	81.6 <u>18/</u>	12.0 <u>19/</u>	Gold (47.2), semi-fabricated goods of mining origin (15.9) and crude materials of mining origin (12.8)	Intermediate goods (41.0) and capital goods (40.6)	
Uganda <u>7/</u>	154.1	94.7	11.1 <u>20/</u>	45.1 <u>8/</u>	25.7 <u>9/</u>	19.1 <u>21/</u>	--	Coffee (90.1), cotton (3.6) and tea (1.1)	Mineral fuels (24.5) and manufactured goods, n.e.s. (12.0) <u>10/</u>	
Uruguay	1,721.5 (1,604.5)	1,721.5 (1,604.5)	56.9	54.7	27.5	30.5 <u>22/</u>	13.2 <u>23/</u>	Meat (23.0), wool (16.1) and textile manufactures (9.4)	Intermediate goods (81.0) and capital goods (13.0) <u>10/</u>	
Zaire	157.7 (154.9)	...	10.4	82.3	43.9	...	--	Copper (35.7), crude oil (17.1), diamonds (11.7) and coffee (11.2)	...	
Zambia	409.7	...	36.0	73.1 <u>24/</u>	41.3 <u>25/</u>	...	--	Copper (81.8) and Cobalt (8.9)	Petroleum (23.3) and fertilizer (6.4)	

Sources: National authorities and staff estimates.

1/ Except as footnoted below. The GDP estimate is at market prices, and the ratio of money plus quasi-money is based on end-of-period data. Ratios of foreign trade to GDP have been calculated in each case using the official exchange rate, except for the Dominican Republic (see footnote 5).2/ Figures in parentheses refer to percentages.3/ Capital and durable consumer goods.4/ Figures in parentheses refer to per capita GNP.5/ Ratios of foreign trade to GDP have been calculated using an exchange rate of RDS2.0 per U.S. dollar.6/ Data refer to 1983 for capital and durable consumer goods, and fuels.7/ Data for 1984 has been obtained by averaging data for fiscal 1983/84 and 1984/85, where appropriate.8/ Ratio of exports and imports plus net services and private transfers.9/ Ratio of imports plus net services and private transfers.10/ Ratio refers to 1983.11/ All data refer to 1983.12/ Ratio of commodity exports and imports.13/ Ratio of commodity exports.14/ Chemicals, rubber, and related products (10); metals and metal products (9); cement, glass, ceramics, and related products (8); machinery, equipment, and electrical equipment (8); and transport equipment (4).15/ Only import of capital goods.16/ Only export of electronic goods.17/ Includes factor services.18/ Only imports of capital and intermediate goods.19/ Only export of fabricated goods.20/ Data for money plus quasi-money is for end-September 1984.21/ Ratio in 1983 for the sum of manufactured goods, n.e.s. (12.0) and machinery and transport equipment (7.1).22/ Includes metal and metal products (4.5), machinery and equipment (19.1), transport equipment (5.0) and precision instruments (1.9).23/ Ratio of textile and leather manufactures to total commodity exports in 1983.24/ Ratio of commodity exports and imports plus net services.25/ Ratio of commodity imports plus net services.

Table 2. Exchange Rate Arrangements as of December 31, 1985 <sup>1/</sup>

Pegged						Flexibility Limited vis-à-vis a Single Currency or Group of Currencies		More Flexible		
Single currency		Other		Currency composite		Single	Cooperative	Adjusted according to a set of indicators	Managed floating	Independently floating
U.S. dollar	F. franc			SDR	Other	currency <sup>2/</sup>	arrangements			
Antigua & Barbuda	Lao P.D. Rep. <sup>3/</sup>	Benin	Bhutan (Indian rupee)	Burma	Algeria <sup>3/</sup>	Afghanistan <sup>3/</sup>	Belgium <sup>3/</sup>	Brazil <sup>4/</sup>	Argentina	Australia
Bahamas <sup>3/</sup>	Libya	Burkina Faso		Burundi	Austria	Bahrain <sup>5/</sup>	Denmark	Chile <sup>3/4/</sup>	Costa	Bolivia
Barbados	Nicaragua <sup>3/</sup>	Cameroon	The Gambia (L stg.)	Guinea <sup>3/</sup>	Bangladesh <sup>3/</sup>	Qatar <sup>5/</sup>	France	Colombia	Rica <sup>3/</sup>	Canada
Belize	Oman	Central African Rep.		Iran, Islamic Rep. of	Botswana	Saudi Arabia <sup>5/</sup>	Germany	Portugal	Ecuador <sup>3/</sup>	Dominican Republic
Djibouti	Panama	Chad			Cape Verde	United Arab Emirates <sup>5/</sup>	Ireland	Somalia <sup>3/6/</sup>	El Salvador <sup>3/</sup>	Republic of Jamaica
					China, P.R.		Italy <sup>7/</sup>		Greece	
Dominica	Paraguay <sup>3/</sup>	Comoros	Lesotho <sup>3/</sup> (SAR)	Jordan	Cyprus		Luxembourg <sup>3/</sup>		Guinea-Bissau	Japan
Egypt <sup>3/</sup>	Peru <sup>3/</sup>	Congo		Kenya <sup>8/</sup>	Fiji		Netherlands		Iceland	Lebanon
Ethiopia	St. Christopher and Nevis	Equatorial Guinea	Swaziland (SAR)	Rwanda	Finland <sup>8/</sup>				India <sup>9/</sup>	New Zealand
Ghana	St. Lucia	Gabon	Tonga (Australian dollar)	Sierra Leone <sup>3/</sup>	Guyana				Indonesia	Philippines
Grenada		Ivory Coast			Hungary				Israel	South Africa <sup>3/</sup>
Guatemala <sup>3/</sup>				Sao Tomé & Principe	Kuwait				Korea	United Kingdom
Haiti	St. Vincent and The Grenadines	Mali		Seychelles	Madagascar				Mexico <sup>3/</sup>	
Honduras	Suriname	Niger		Vanuatu	Malawi				Morocco	United States
Iraq	Syrian Arab Rep. <sup>3/</sup>	Senegal		Viet Nam	Malaysia <sup>8/</sup>				Nigeria <sup>3/</sup>	Uruguay
	Trinidad & Tobago	Togo			Maldives				Pakistan	Zaire
	Venezuela <sup>3/</sup>				Malta				Spain	
	Yemen Arab Rep.				Mauritania				Sri Lanka	Zambia
	Yemen P.D.R.				Mauritius				Turkey	
					Mozambique <sup>3/</sup>				Uganda	
					Nepal				Western Samoa	
					Norway				Yugoslavia	
					Papua New Guinea					
					Romania					
					Singapore					
					Solomon Islands					
					Sudan <sup>3/</sup>					
					Sweden <sup>10/</sup>					
					Tanzania					
					Thailand					
					Tunisia					
					Zimbabwe					

<sup>1/</sup> No current information is available relating to Democratic Kampuchea.

<sup>2/</sup> In all cases listed in this column, the U.S. dollar was the currency against which exchange rates showed limited flexibility.

<sup>3/</sup> Member maintains dual exchange markets involving multiple exchange arrangements. The arrangement shown is that maintained in the major market.

<sup>4/</sup> Member maintains a system of advance announcement of exchange rates.

<sup>5/</sup> Exchange rates are determined on the basis of a fixed relationship to the SDR, within margins of up to  $\pm 7.25$  percent. However, because of the maintenance of a relatively stable relationship with the U.S. dollar, these margins are not always observed.

<sup>6/</sup> The exchange rate is maintained within overall margins of  $\pm 7.5$  percent about the fixed shilling/SDR relationship; however, the exchange rate will be re-evaluated when indicative margins of  $\pm 2.25$  percent are exceeded.

<sup>7/</sup> Margins of  $\pm 6$  percent are maintained with respect to the currencies of other countries participating in the exchange rate mechanism of the European Monetary System.

<sup>8/</sup> The exchange rate is maintained within margins of  $\pm 2.25$  percent.

<sup>9/</sup> The exchange rate is maintained within margins of  $\pm 5$  percent on either side of a weighted composite of the currencies of the main trading partners.

<sup>10/</sup> The exchange rate is maintained within margins of  $\pm 1.5$  percent.

APPENDIX

Table 3. Floating Exchange Regimes: Exchange Rate Variability  
in Selected Countries in the Pre-Float and Floating Periods, 1976-85 1/

	Bilateral U.S. dollar rate, floating compared to pre-float period		Nominal effective rate, floating compared to pre-float period		Real effective rate, floating compared to pre-float period	
	Trend	Without	Trend	Without	Trend	Without
	adjusted	trend	adjusted	trend	adjusted	trend
Bolivia	I <u>2/</u>	D <u>3/</u>	I <u>2/</u>	U	I <u>2/</u>	U
Dominican Republic	D	D	I	I <u>4/</u>	I	U
Jamaica	I	D <u>3/</u>	I	D <u>3/</u>	I <u>2/</u>	D <u>3/</u>
Philippines	I	U	I	U	I <u>2/</u>	U
Uganda	I	D <u>3/</u>	I	D <u>3/</u>	I	U
Uruguay	D <u>5/</u>	D	... <u>6/</u>	D	D <u>5/</u>	D
Zaire	I	I <u>4/</u>	I	I <u>4/</u>	I	I

Sources: Appendix Tables 4 and 5.

1/ Comparison of volatility between pre- and post-floating periods is on the basis of appropriate statistical tests at 95 percent confidence interval. The symbols in the table denote the following: I = improvement (reduced volatility in floating period), U = volatility unchanged, and D = deterioration (increased volatility in floating period).

2/ No significant difference by measure (2), volatility reduced by measure (4) (see text).

3/ No significant difference by measure (3), volatility increased by measure (1).

4/ No significant difference by measure (1), volatility reduced by measure (3).

5/ No significant difference by measure (2), volatility increased by measure (4).

6/ Volatility increased by measure (4), volatility reduced by measure (2).

Table 4. Floating Exchange Regimes: Variability of Selected Exchange Rates, 1976-1985 <sup>1/</sup>

	Mean Monthly			Variance of Monthly			Sample Size		
	Absolute Percentage Change <sup>2/</sup>			Absolute Percentage Change <sup>3/</sup>			Offi-	Nominal	Real
	cial US\$ (end of month)	Nominal Effec- tive	Real Effec- tive <sup>4/</sup>	cial US\$ (end of month)	Nominal Effec- tive	Real Effec- tive <sup>4/</sup>	cial US\$ (end of month)	Effec- tive	Effec- tive <sup>4/</sup>
<u>Bolivia</u>									
Jan. 1976-Aug. 1985	4.07	6.04	12.25	259.46	200.78	321.14	116	116	92
Sept. 1985-Dec. 1985	12.84	12.61	10.03	135.38	112.93	48.73	4	4	4
<u>Dominican Republic</u>									
Jan. 1976-Dec. 1984	--	1.18	1.72	--	9.85	10.21	108	108	84
Jan. 1985-Dec. 1985	1.29	1.63	2.52	1.86	2.38	3.82	12	12	12
<u>Jamaica</u>									
Jan. 1976-Nov. 1983	1.09	1.78	1.91	31.98	8.86	6.31	95	95	71
Dec. 1983-Dec. 1985	3.27	3.61	3.37	9.92	7.87	7.75	25	25	25
<u>Philippines</u>									
Jan. 1976-Sept. 1984	0.83	1.44	2.15	9.64	7.48	7.95	105	105	81
Oct. 1984-Dec. 1985	0.95	2.49	2.62	3.61	4.55	4.87	15	15	15
<u>Uganda</u>									
Jan. 1976-May 1984	2.94	2.66	5.47	83.45	82.32	102.96	101	101	77
June 1984-Dec. 1985	7.93	7.96	7.52	94.47	79.89	49.52	19	19	19
<u>Uruguay</u>									
Jan. 1976-Oct. 1982	1.94	1.91	1.87	1.13	3.48	3.71	82	82	58
Nov. 1982-Dec. 1985	6.53	4.63	4.18	70.42	62.37	57.34	38	38	38
<u>Zaire</u>									
Jan. 1976-Jan. 1984	3.99	3.97	7.23	124.37	101.16	113.27	97	97	73
Feb. 1984-Dec. 1985	2.49	2.49	2.22	3.45	5.07	3.30	23	23	23

Sources: IMF, International Financial Statistics and Information Notice System; and staff.

<sup>1/</sup> Exchange rates are expressed as the foreign currency price of a domestic currency unit.

<sup>2/</sup> Volatility measure (1) (see text). In the post-floating periods, the first month in each case is the month of floating exchange rates.

<sup>3/</sup> Volatility measure (3).

<sup>4/</sup> Real effective exchange rate data for all countries are calculated from January 1978.

Table 5 . Floating Exchange Regimes: Exponential-Trend-Corrected Variability of Selected Exchange Rates, 1976-1985 <sup>1/</sup>

	Mean Monthly Absolute Percentage Change <sup>2/</sup>			Variance of Monthly Percentage Changes <sup>3/</sup>			Sample Size		
	Offi- cial US\$ (end of month)	Nominal Effec- tive	Real Effec- tive <sup>4/</sup>	Offi- cial US\$ (end of month)	Nominal Effec- tive	Real Effec- tive <sup>4/</sup>	Offi- cial US\$ (end of period)	Nominal Effec- tive	Real Effec- tive <sup>4/</sup>
<b>Bolivia</b>									
Jan. 1976-Aug. 1985	147.34	117.15	21.95	24,054.37	14,661.52	1,218.54	116	116	92
Sept. 1985-Dec. 1985	4.64	5.90	6.26	14.10	4.55	0.06	4	4	4
<b>Dominican Republic</b>									
Jan. 1976-Dec. 1984	--	10.31	9.07	--	79.50	31.73	108	108	84
Jan. 1985-Dec. 1985	1.37	1.86	2.63	0.84	1.91	2.90	12	12	12
<b>Jamaica</b>									
Jan. 1976-Nov. 1983	14.90	15.75	4.26	56.23	44.09	14.19	95	95	71
Dec. 1983-Dec. 1985	4.54	3.40	3.39	16.48	5.05	5.64	25	25	25
<b>Philippines</b>									
Jan. 1976-Sept. 1984	11.99	8.46	6.81	56.64	53.84	20.30	105	105	81
Oct. 1984-Dec. 1985	2.17	4.01	4.97	1.70	4.83	6.03	15	15	15
<b>Uganda</b>									
Jan. 1976-May 1984	82.54	70.35	63.78	7,425.86	5,417.54	6,439.75	101	101	77
June 1984-Dec. 1985	11.96	9.16	9.10	88.64	85.30	68.35	19	19	19
<b>Uruguay</b>									
Jan. 1976-Oct. 1982	5.89	15.45	5.00	19.27	101.46	10.45	82	82	58
Nov. 1982-Dec. 1985	5.46	7.35	5.85	36.37	141.75	88.84	38	38	38
<b>Zaire</b>									
Jan. 1976-Jan. 1984	24.23	24.49	19.37	423.09	408.23	390.81	97	97	73
Feb. 1984-Dec. 1985	2.27	4.47	2.83	2.11	7.88	3.07	23	23	23

Sources: IMF, International Financial Statistics and Information Notice System; World Currency Yearbook 1984; and staff estimates.

<sup>1/</sup> A simple time trend was fitted for all exchange rates and for all countries. The exchange rates are expressed as the foreign currency price of a domestic currency unit.

<sup>2/</sup> Volatility measure (2) (see text). In the post-floating periods, the first month in each case is the month of floating exchange rates.

<sup>3/</sup> Volatility measure (4).

<sup>4/</sup> Real effective exchange rate data for all countries are calculated from January 1978.

Table 6. Floating Exchange Regimes: Net Capital Flows, 1980-85

(In percent of imports plus net service payments)

	1980	1981	1982	1983	1984	1985	Average of 1980 to the Year of Float <u>1/</u>	Average of the Post-Float Periods
<u>Dominican Republic</u>								
Medium and long-term capital	17.33	13.06	13.53	1.70	7.52	-9.27	10.63	-9.27
Short-term capital <u>2/</u>	11.88	3.95	-6.49	4.24	-2.84	2.18	2.15	2.18
<u>Jamaica</u>								
Medium and long-term capital	18.38	15.95	33.0	22.84	44.81	39.88	22.54	42.35
Short-term capital <u>2/</u>	-10.76	0.17	2.72	-26.41	8.11	12.86	-8.57	10.49
<u>Philippines</u>								
Medium and long-term capital	11.44	18.26	17.97	18.27	-2.71	-20.30	12.65	-20.30
Short-term capital <u>2/</u>	5.13	-6.23	-3.02	-12.19	-0.61	-0.16	-3.38	-0.16
<u>Uganda</u>								
Medium and long-term capital	7.91	4.75 <u>3/</u>	-27.17 <u>3/</u>	-0.18 <u>3/</u>	10.23	8.90	-0.89	8.90
Short-term capital <u>2/</u>	-16.50	11.29 <u>3/</u>	-4.91 <u>3/</u>	-3.93 <u>3/</u>	-9.63	-2.14	-4.74	-2.40
<u>Uruguay</u>								
Medium and long-term capital	41.29	34.07	29.79	51.98	10.47	-43.27	35.05	6.39
Short-term capital <u>2/</u>	8.23	-6.28	-55.38	-38.42	-13.73	--	-17.81	-17.38
<u>Zaire</u>								
Medium and long-term capital	-0.93	-7.77	-7.69	-9.79	-13.93	-13.51	-6.55	-13.72
Short-term capital <u>2/</u>	8.43	6.91	10.23	-2.93	4.82	8.08	5.66	6.45
Memorandum items:								
<u>Errors and omissions</u>								
Dominican Republic <u>4/</u>	6.21	6.09	-6.29	9.96	-0.88	...	3.02	...
Philippines	1.14	-5.89	-4.26	-2.04	-0.10	6.08	-2.23	6.08
Uruguay	7.70	-11.08	-96.50	-8.94	-10.00	...	-33.29	9.47 <u>5/</u>
<u>Debt rescheduling <u>6/</u></u>								
Dominican Republic	--	--	--	10.69	--	25.97		
Uganda	...	1.39 <u>3/</u>	12.08 <u>3/</u>	6.79 <u>3/</u>	2.07	3.06		
Uruguay	--	--	--	41.8	11.1	25.2		
Zaire	67.85	17.13	7.36	48.35	22.47	18.58		

Source: National authorities and staff estimates.

1/ Except in the case of Zaire: although the zaire was floated in 1984, for the purpose of calculating averages in this table 1984 is considered to be a post-float year.2/ Includes errors and omissions.3/ Data for fiscal year ending in June.4/ Comprises private short-term capital, commercial banks' working capital, and errors and omissions.5/ Average of 1983 and 1984.6/ Not included in the capital flows data above.

Table 7. Floating Exchange Regimes: International Reserves, External Debt, Arrears, and Foreign Currency Deposits, 1980-85

(In percent of imports plus net service payments; end of period) 1/

	1980	1981	1982	1983	1984	1985
<u>Bolivia</u>						
Gross official international reserves	10.0	7.2	14.5	16.2	25.6	15.9
External debt outstanding <u>2/</u>	237.6	195.1	279.5	372.8	388.6	342.0
External payments arrears outstanding	1.6	3.6	13.7	20.2	82.9	117.4
Currency deposits abroad by non-bank residents	...	...	...	45.4	42.9	41.6 <u>3/</u>
<u>Dominican Republic</u>						
Gross official international reserves	11.1	12.6	9.1	12.2	19.2	26.5
External debt outstanding <u>2/</u>	92.8	102.5	140.1	174.4	200.8	249.6
External payments arrears outstanding	8.1	17.5	30.6	35.8	58.2	57.5
Currency deposits abroad by non-bank residents	...	39.7	46.4	26.8	63.5	74.5 <u>3/</u>
<u>Jamaica</u>						
Gross official international reserves	6.8	5.1	7.2	6.0	7.9	14.1
External debt outstanding <u>2/</u>	142.2	154.2	204.1	251.2	272.1	370.0
External payments arrears outstanding	9.3	3.9	--	16.5	3.1	--
Currency deposits abroad by non-bank residents	...	7.8	10.5	12.2	13.6	17.4
<u>Lebanon</u>						
Gross official international reserves	41.8	39.9	74.5	51.4	23.2	59.7
External debt outstanding <u>2/</u>	4.9	6.1	7.6	6.5	6.3	9.9
External payments arrears outstanding	--	--	--	--	--	--
Currency deposits abroad by non-bank residents	...	112.4	124.7	135.6	191.3	340.1
<u>Philippines</u>						
Gross official international reserves	35.2	25.1	11.4	11.6	12.4	30.1
External debt outstanding <u>2/</u>	212.3	253.1	283.4	320.7	390.3	523.4
External payments arrears outstanding	--	--	--	19.4	31.1	--
Currency deposits abroad by non-bank residents	...	5.7	5.9	9.5	15.5	21.9
<u>Uganda</u>						
Gross official international reserves	0.5	8.5	14.4	19.7	10.2	11.5
External debt outstanding <u>2/</u>	95.7	121.5 <u>4/</u>	107.7	115.2	134.4	150.9
External payments arrears outstanding <u>4/</u>	35.8	31.5	28.8	22.2	12.4	14.6
Currency deposits abroad by non-bank residents	...	14.2	11.8	16.1	18.9	17.1
<u>Uruguay</u>						
Gross official international reserves	22.1	25.6	8.1	16.8	13.6	15.8
External debt outstanding <u>2/</u>	85.8	121.5	212.6	279.6	369.6	344.4
External payments arrears outstanding	--	--	--	--	--	--
Currency deposits abroad by non-bank residents	...	51.7	76.1	120.9	175.0	177.0
<u>Zaire</u>						
Gross official international reserves	8.6	7.0	1.8	2.3	3.6	4.5
External debt outstanding <u>2/</u>	184.9	204.1	220.9	225.5	233.7	219.4
External payments arrears outstanding	24.1	28.4	45.9	14.4	9.5	6.6
Currency deposits abroad by non-bank residents	...	22.6	21.9	23.3	24.6	26.3
Memorandum items:						
<u>Foreign currency deposits with domestic banks in</u>						
Philippines	37.1	47.2	50.2	50.6	53.8	...
Uruguay	68.9	72.2	125.1	126.8	146.9	...
Zaire	2.1	1.5	1.9	0.3	0.4 <u>3/</u>	...

Sources: National authorities; IMF, International Financial Statistics; and staff estimates.

1/ Except data for Lebanon is in percent of imports; and certain data for Uganda refer to fiscal year ending in June, as footnoted below.

2/ Coverage of external debt data differ among countries, and therefore the debt ratios may not be comparable between countries.

3/ As of September.

4/ Ending in June.

Table 8. Growth and Foreign Trade Performance in Countries  
With Floating Exchange Rates and Fund Programs

(Percentage change, in volume terms)

	1981	1982	1983	1984	1985
<b>GNP/GDP</b>					
Dominican Republic	3.9	1.7	4.0	0.5	-1.2
Jamaica <u>1/</u>	2.4	0.5	1.1	-0.2	-3.8
Philippines	3.4	2.7	1.3	-5.3	-4.0
Uganda <u>1/</u>	6.0	8.0	6.0	5.0	0.6
Uruguay	1.9	-9.7	-5.8	-2.4	0.6
Zaire	2.8	-2.2	1.2	2.8	2.5
Developing countries	2.2	1.6	1.3	4.1	3.1
<b>Merchandise exports</b>					
Dominican Republic	10.9	-25.7	-1.4	6.3	-11.0
Jamaica <u>1/</u>	-11.4	-14.8	5.8	-0.7	-8.0
Philippines	1.1	5.6	-5.0	-2.3	-7.0
Uganda <u>1/</u>	52.0	15.0	-12.0	-10.0	-10.0
Uruguay	15.1	-5.0	8.9	-11.1	0.9
Zaire	-14.6	10.9	8.8	0.7	-0.2
Developing countries	-5.7	-8.2	2.9	7.1	0.4
<b>Merchandise imports</b>					
Dominican Republic	-10.8	-14.7	2.2	-7.7	1.4
Jamaica <u>1/</u>	18.3	-9.1	-15.8	-0.3	-12.2
Philippines	-8.0	14.1	-4.0	-28.6	-12.0
Uganda <u>1/</u>	-3.0	12.0	-4.0	8.0	-12.0
Uruguay	-12.0	-32.0	-23.8	-3.9	-5.0
Zaire	-9.6	-12.2	-7.6	-0.4	4.2
Developing countries	7.1	-4.2	-3.2	2.2	-0.3

Sources: IMF, World Economic Outlook, February 1986; Executive Board Documents; and staff estimates.

1/ Fiscal years.

Table 9. Comparison of Average Retail Prices  
for Selected Goods in Uganda, Zaire,  
and Sierra Leone (First Quarter 1984)

(In U.S. dollars per unit)

	Units	Uganda	Zaire	Sierra Leone
Sugar	1 Kg.	1.26	0.74	2.40
Tea	1 Kg.	3.84		20.00
Salt	1 Kg.	0.39	0.28	1.14
Rice	1 Kg.	0.79	0.57	0.57
Kerosene	1 Liter	0.51		0.19 <u>1/</u>
Soap	1 Kg.	2.24		6.22
Cloth	1 meter	1.20		3.10
Memorandum: Exchange Rate (per US\$1)		292.06	35.288	2.50

Source:

1/ Pre-January 4, 1985 price.

Table 10. Macroeconomic Performance of Countries with Real Effective Exchange Rate Rule and Floating Exchange Rates During Fund Programs

Country	Date	Exchange rate system <sup>1/</sup>	Real effective exchange rate <sup>2/</sup>	Consumer prices; percentage change <sup>3/</sup>		Current account in percent of GNP/GDP <sup>4/</sup>		Fiscal balance in percent of GNP/GDP <sup>5/</sup>		Broad money percentage change <sup>6/</sup>		Exchange and Trade Restrictions <sup>7/</sup>
				12 month Before	12 month After	Year before	Program year	Year before	Program year	Year before	Program year	
Argentina	10/83	Flexible	19.0	288.2	554.7	-4.0	-3.6	-18.6	-11.2	154.6	526.8	U
Argentina	12/84	Flexible	-9.8	608.0	735.0	-3.6	-1.9	-11.2	-4.2	526.8	429.0	Lib
Bangladesh	12/85	Flexible	...	10.5	...	-8.3	-6.9	-9.3	-7.4	25.6	15.9	Lib
Brazil	2/83	Flexible	-20.5	96.5	163.9	-6.5	-2.9	-15.8	-18.5	113.5	149.3	Lib
Chile	1/83	Flexible	-18.1	9.9	27.3	-9.5	-5.4	-3.4	-3.0	9.8	15.5	Int
Chile	7/85	Flexible	-25.8	25.3	30.7	-10.7	-8.3	-4.4	-3.1	31.4	92.1	U
Costa Rica	3/85	Flexible	-2.7	8.7	10.2	-6.4	-2.8	-1.9	-1.5	11.2	12.0	U
Dominican Republic	4/85	<u>Floating</u>	14.9	35.4	35.3	-4.6	-4.7	-5.2	-2.3	30.2	15.2	U
Ghana	8/84	Flexible	-23.6	87.2	8.5	-1.9	-2.9	-1.8	-2.1	39.3	31.7	Lib
Hungary	1/84	Flexible	1.4	7.3	8.4	0.2	1.3	0.8	3.4	3.8	5.2	Lib
Jamaica	6/84	<u>Floating</u>	-24.9	17.4	30.4	-12.7	-12.3	-15.2	-6.4	24.7	22.3	Lib
Jamaica	7/85	<u>Floating</u>	-14.6	29.8	23.5	-12.3	-11.5	-6.4	-4.7	22.3	18.6	Lib
Kenya	3/83	Flexible	-4.5	19.3	10.9	-2.3	-3.2	-3.1	-4.2	11.3	11.4	Lib
Kenya	1/85	Flexible	-1.5	10.2	13.3	-3.2	-4.7	-4.2	-5.1	11.4	11.7	Lib
Korea	7/83	Flexible	-4.9	4.5	2.3	-3.7	-2.2	-1.6	-1.4	15.2	10.6	Lib
Korea	7/85	Flexible	-11.9	2.3	2.8	-2.2	-1.1	-1.4	-1.5	10.6	18.2	Lib
Madagascar	12/83	Flexible	-14.3	20.7	10.0	-10.9	-10.2	-6.7	-4.8	-1.5	18.3	U
Madagascar	4/85	Flexible	-4.5	9.9	10.8	-10.2	-10.1	-4.8	-4.7	18.3	5.1	U
Malawi <sup>8/</sup>	9/83	Flexible	1.0	11.3	11.7	-9.5	-7.8	-8.1	-5.8	10.2	-1.1	U
Mauritania	4/85	Flexible	-10.5	10.6	12.8	-24.3	-14.1	-10.9	-4.0	9.0	24.1	U
Mauritius	5/83	Flexible	-2.7	8.6	5.2	-5.2	-2.5	-9.5	-6.4	10.0	17.5	U
Mauritius	3/85	Flexible	-3.2	8.1	6.3	-2.8	-0.8	-5.5	-5.0	16.5	16.8	Lib
Morocco	9/83	Flexible	-7.5	5.1	12.5	-5.6	-9.0	-10.4	-8.4	17.4	10.3	Lib
Morocco	9/85	Flexible	-12.2	8.4	8.4	-3.2	0.3	-7.3	-5.9	16.5	11.0	U
Nepal	12/85	Flexible	...	7.0	...	-4.1	-4.5	-8.0	-6.9	17.6	22.0	Lib

Table 10 (concluded). Macroeconomic Performance of Countries with Real Effective Exchange Rate Rule and Floating Exchange Rates During Fund Programs

Country	Date	Exchange rate system <u>1/</u>	Real effective exchange rate <u>2/</u>	Consumer prices; percentage change <u>3/</u>		Current account in percent of GNP/GDP <u>4/</u>		Fiscal balance in percent of GNP/GDP <u>5/</u>		Broad money percentage change <u>6/</u>		Exchange and Trade Restrictions <u>7/</u>
				Before 12 month	After 12 month	Year before	Program year	Year before	Program year	Year before	Program year	
Peru	4/84	Flexible	-5.3	119.6	113.9	-5.3	-2.7	-11.7	-8.1	96.9	144.7	Int
Philippines	2/83	Flexible	-15.8	9.9	12.2	-8.1	-8.1	-5.3	-3.2	16.1	18.6	Lib
Philippines	12/84	Floating	10.2	48.4	26.7	-4.5	-0.3	-3.0	-2.7	7.3	9.5	Lib
Portugal	10/83	Flexible	-0.9	21.8	31.1	-7.2	-2.3	-15.1	-17.6	20.3	27.4	Lib
Solomon Islands	6/83	Flexible	-7.8	10.4	7.4	-13.4	-13.3	-11.3	-10.8	22.6	19.4	U
Sri Lanka	9/83	Flexible	7.5	6.9	19.4	-12.4	-4.3	-10.6	-6.9	21.7	16.8	U
Thailand	6/85	Flexible	-13.0	0.4	3.2	-5.1	-3.8	-4.9	-6.2	20.2	10.2	U
Turkey	6/83	Flexible	-4.8	27.7	35.9	-1.8	-3.8	-6.5	-8.0	69.8	37.8	Lib
Turkey	4/84	Flexible	2.1	33.1	53.2	-3.8	-2.8	-8.0	-8.5	37.8	50.0	Lib
Uganda	9/83	Floating	-37.0	27.2	20.2	-2.6	-1.2	-3.4	-4.0	51.0	70.0	Int
Uruguay	4/83	Floating	-30.9	23.4	49.0	-8.3	-4.0	-18.4	-16.4	16.1	18.0	Lib
Uruguay	9/85	Floating	-8.3	68.0	75.9	-2.5	-2.7	-9.3	-6.5	49.9	91.2	U
Western Samoa	6/83	Flexible	-1.5	13.8	19.7	-17.1	-11.2	-14.6	-2.2	35.4	16.6	U
Western Samoa	7/84	Flexible	-9.0	19.4	9.0	-11.2	-11.2	-2.2	-6.6	16.6	9.0	Lib
Yugoslavia	4/84	Flexible	-0.2	45.8	57.1	0.5	2.0	--	--	67.5	64.5	U
Yugoslavia	4/85	Flexible	-4.5	57.1	76.2	2.0	1.0	--	--	66.8	59.3	U
Zaire	12/83	Floating	-62.2	70.9	60.4	-8.1	-7.5	-3.0	-3.5	74.0	74.2	Lib
Zaire	4/85	Floating	-13.9	35.7	25.2	-7.5	-6.9	-3.5	-2.2	34.2	27.3	U
Zambia	7/84	Flexible	-7.9	20.4	25.1	-6.4	-10.2	-7.4	-7.3	11.1	18.0	Int
Zimbabwe	3/83	Flexible	-9.2	16.3	20.4	-11.1	-8.4	-9.2	-10.9	25.3	0.3	U

1/ The classification of the exchange rate system refers to the program period. Flexible arrangements include exchange rate systems where the real effective exchange rate is kept constant or changed and crawling peg systems.

2/ The real effective exchange rate is calculated as the change in the 12-month period beginning with the month of program approval compared to the 12-month period preceding the program.

3/ The rate of increase in consumer prices before is measured as the average increase in the 12 months preceding the month of program approval on a year-over-year basis while after refers to the average inflation rate in the first 12 months of the program. Where a period of less than 12 months has occurred after the program, the inflation figure refers only to the relevant number of months for which data is available, with December 1985 being the last month of consumer price information for all countries.

4/ The current account balance (including official transfers and, if applicable, after rescheduling) as percent of GNP/GDP refers to the calendar or fiscal year balance before and during the program year.

5/ The fiscal balance in percent of GNP/GDP comprises the broadest concept of fiscal balance (after rescheduling) for each country and refers to the calendar or fiscal year before and during the program year.

6/ Average annual change in broad money in the calendar year before and after program approval. In certain countries the increase refers to end-of-period increase.

7/ An overall evaluation of the changes in restrictiveness of the trade and payment system during the program period.

8/ Malawi has an Extended Arrangement; the program year refers to the second program year.

U = Unchanged

Int = Intensification

Lib = Liberalization

