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To: Members of the Executive Board
From: The Secretary
Subject: The SDR and the International Monetary System

There is attached for consideration by the Executive Directors a paper on the SDR and the international monetary system. A summary and issues for discussion appear on pages 34-36. This paper, together with the paper on key issues in the functioning of the international monetary system (SM/89/26, 2/2/89), is presently scheduled for discussion on Friday, February 24, 1989. It is now proposed to shift the scheduling to Wednesday, March 1, 1989.

Mr. Isard (ext. 6640) or Mr. Mathieson (ext. 7662) is available to answer technical or factual questions relating to this paper prior to the Board discussion.

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INTERNATIONAL MONETARY FUND

The SDR and the International Monetary System

Prepared by the Research Department

(In consultation with other Departments)

Approved by Jacob A. Frenkel

February 7, 1989

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I. Introduction

In its September 1988 communiqué, the Interim Committee requested that the Executive Board pursue its work on issues related to the concept and measurement of international liquidity and continue to study how to increase the usefulness of the SDR as a reserve asset. ^{1/} This paper provides background material for a discussion of these subjects. Section II presents a brief historical review of the evolution of the SDR and developments in the international monetary system. This historical perspective raises issues about the concept, measurement, and distribution of international liquidity, which are discussed in Section III. Section IV goes on to consider the implications of these issues and developments for the role of the SDR, and Section V then addresses a number of possible approaches for invigorating the role of the SDR. In examining these approaches, the paper adopts a longer-term view and supplements the discussion in SM/89/26, "Key Issues in the Functioning of the International Monetary System." The possible approaches are grouped under four broad headings: (1) ways for the SDR to help promote growth without discouraging adjustment; (2) ways in which the use of SDRs by official or private entities could be facilitated so as to contribute to greater exchange rate stability and more effective adjustment; (3) ways that the SDR might be used to provide an anchor against inflation; and (4) ways for the SDR to improve the efficiency and stability of the reserve system. Section VI presents a summary and some issues for discussion.

II. Historical Background ^{2/}

1. The purpose of creating the SDR

The lengthy deliberations that led to the creation of the SDR were initiated by fears that the gold exchange standard was headed toward a major conflict. As argued by Triffin, ^{3/} in a world in which the demand for reserves is expanding more rapidly than the supply of gold (at a given price of gold in terms of the reserve currency), a conflict arises between meeting the demand for liquidity (at the given price of gold) and maintaining confidence in the reserve currency. Accommodation of the world's

^{1/} "Communiqué of the Interim Committee of the Board of Governors of the International Monetary Fund," Press Release No. 88/33, September 26, 1988, paragraph 8.

^{2/} This section has drawn on the preliminary draft of a paper under preparation for the Research Department by R.R. Rhomberg, "Constructing the SDR: Evolution of Ideas and Techniques."

^{3/} Robert Triffin, Gold and the Dollar Crisis, 1960.

demand for reserves could imply persistent and, perhaps, ever-increasing deficits in the balance of payments of the reserve currency country, together with an erosion over time of the share of its liquid liabilities that the reserve currency country could back with its gold holdings. Thus, to experts on the international monetary system in the early 1960s, it appeared that, on the one hand, accommodating the demand for liquidity would give rise to a confidence problem whereas, on the other hand, preserving confidence in the reserve currency was not consistent with satisfying the world's demand for liquidity while also maintaining a stable price of gold.

The SDR was conceived as a solution to this apparent dilemma. By supplementing the supply of existing reserve assets through the creation of SDRs, the total demand for reserves could be met in a manner that would not preclude the adoption of responsible adjustment policies by reserve currency countries (and thereby would help promote the attainment of the Fund's purposes).

The SDR was not, however, given much chance to play a role in the environment for which it had been conceived. As events unfolded, by the time the SDR system was in place at the end of the 1960s, the main reserve currency country had developed an inflation problem for reasons largely unrelated to the world's demand for liquidity, 1/ and confidence in the gold exchange standard could not be preserved. By mid-March 1973, convertibility of the U.S. dollar into gold had been ended for a year and a half, and the world's major currencies had moved to a system of managed floating.

2. The intent of the allocation criteria

The provision that governs decisions on SDR allocations is set forth in Article XVIII, Section 1(a), of the Fund's Articles of Agreement:

"In all its decisions with respect to the allocation and cancellation of special drawing rights the Fund shall seek to meet the long-term global need, as and when it arises, to supplement existing reserve assets in such manner as will promote the attainment of its purposes and will avoid economic stagnation and deflation as well as excess demand and inflation in the world."

The key concept in this provision is the "long-term global need."

1/ It is widely perceived that the shift to an expansionary fiscal stance in the United States in the mid-1960s, and the consequent rise in U.S. inflation, played a large role in undermining the Bretton Woods system. See the discussion in Robert Solomon, The International Monetary System 1945-1976: An Insider's View, New York: Harper and Row, 1977, pp. 100-104.

In some respects, the original intent of this concept is clear. In particular, historical accounts 1/ indicate that the reference to "long-term" considerations was intended to prevent the process of SDR allocation from becoming a mechanism for addressing cyclical problems. In addition, the reference to "global" considerations reflected an agreement that:

"Deliberate reserve creation, when decided upon, should be neither geared nor directed to the financing of balance of payments deficits of individual countries, but should take place on the basis of a collective judgment of the reserve needs of the world as a whole." 2/

The most controversial part of the concept is that of "need." In this regard, a paper prepared by the Fund staff in 1966 3/ provides one view of how it was intended, at the time, that the existence of a "need" should be judged:

"Whether or not there is a 'need' for increases in reserves depends on the expected consequences of such increases and on whether the consequences are judged on balance to be desirable or undesirable in the light of such generally accepted objectives as those set forth in Article I of the IMF Articles of Agreement. In the main, reserve changes exercise their effects through the incentives which they provide to governments and monetary authorities to change their policies in various ways." 4/

With respect to quantifying the amount of deliberate reserve creation that would meet the total need for reserves, the conceptual framework employed by the Fund staff at the time linked the growth of foreign exchange reserves to the balance of payments deficits of the reserve currency countries. 5/ Thus, at the time of the first decision to allocate SDRs, the recommended size of the allocation was determined by first projecting the growth in the total demand for reserves and then subtracting projections of changes in the different sources of supply--

1/ See SM/84/148, "Allocations of SDRs--Legislative History of the Concept of 'Global Need' to Supplement Existing Reserves," June 27, 1984.

2/ Communiqué of the G-10 Ministers issued at the end of their meeting on July 25-26, 1966 in The Hague, as cited in Margaret Garritsen de Vries, The International Monetary Fund 1966-71: The System Under Stress, International Monetary Fund, Washington, D.C., 1976, Vol. I, pp. 95-98.

3/ "The Need for Reserves: An Exploratory Paper," as reprinted in International Reserves: Needs and Availability, International Monetary Fund, Washington, D.C., 1970.

4/ Ibid, p. 370.

5/ Ibid, pp. 414-19.

namely, changes in official gold holdings, reserve creation through the General Account of the Fund, "various minor sources of reserve creation," and foreign exchange reserves created (or destroyed) through the official settlements imbalances of the United States and the United Kingdom. 1/ The recommended volume of SDR allocations corresponded to a rough estimate of the residual amount necessary to equate the projected growth in demand and the projected increase in supply.

3. The expansion of international capital markets

The conceptual framework for projecting the supply of reserves was cast in different light by developments during the 1970-71 period, when large outflows of private short-term capital from the United States took place against a background of sharply falling interest rates in U.S. money markets. 2/ The potential for large short-term capital flows in response to market incentives had been expanding over the years with the growing internationalization of private capital markets; indeed, the net outflows from the United States during 1970-71 were associated with a large decline in the gross liabilities of U.S. banks to their foreign branches (i.e., with large repayments by head offices of the borrowings they had previously made from their foreign branches). 3/ The increased international mobility of private capital contributed to pressure on monetary authorities outside the United States to defend par values by acquiring large additional amounts of foreign exchange. The foreign exchange holdings of countries other than the United States expanded by nearly \$15 billion in 1970 and nearly \$30 billion in 1971. This was reflected in U.S. official settlements deficits of nearly \$11 billion in 1970 and more than \$30 billion in 1971, 4/ which far exceeded the projections that were relied upon in deciding upon the size of the first SDR allocation. 5/

1/ "A Report to the Board of Governors of the International Monetary Fund Containing the Managing Director's Proposal on the Allocation of Special Drawing Rights for the First Basic Period," September 12, 1969, as reprinted in de Vries, op. cit., Vol. II. See especially pp. 258-9.

2/ See "Developments in International Liquidity," 1971 Annual Report, International Monetary Fund, Chapter 2.

3/ The outstanding stock of these liabilities declined from a peak of about US\$15 billion in October 1969 to \$1.5 billion in June 1971. Ibid., p. 24.

4/ The U.S. official settlements deficit in 1970 would have been even larger if central banks had continued to hold their dollar reserves entirely in the United States instead of beginning to place significant amounts of these reserves in the Eurodollar market. Identified official holdings of Eurodollars increased by approximately \$5.5 billion in 1970 and by another \$10 billion during the 1971-73 period, reaching an outstanding stock of about \$18 billion at the end of 1973. See International Monetary Fund, 1974 Annual Report, Table 11, p. 32.

5/ See "A Report . . . Containing the Managing Director's Proposal . . .," in de Vries, op. cit., Vol. II, pp. 258-9.

The lessons from this experience can be viewed from several different perspectives. One perspective is that in a world of highly developed international financial markets and mobile private capital, it is difficult to predict the changes in official reserve holdings that may result from efforts to manage exchange rates. Thus, even if agreement could be reached on a desirable level and trend for the global stock of reserves, it might be difficult to project with much accuracy how the actual stock of reserves would evolve relative to the desired trend in the absence of deliberate reserve creation (or destruction) through SDR allocation (or cancellation). The inability to predict the cyclical behavior of reserves is not, however, of direct concern for the SDR system, since it is intended that SDR allocation should not be oriented toward cyclical considerations.

The more relevant perspective for the SDR system is that the development of large-scale international financial markets has greatly expanded the capacity of national authorities to obtain foreign exchange reserves either by borrowing foreign currency directly or by issuing home-currency-denominated debt and using the proceeds to purchase foreign exchange. Consequently, the concept of a quantitative reserve shortage has become more difficult to define in a meaningful way, and new issues about the reserve system have arisen. In the latter context, Executive Board discussions of the appropriateness of an SDR allocation have focused, *inter alia*, on the terms and conditions under which "borrowed" reserves are available, and on the possible need for a larger quantity of "owned" reserves. 1/ These issues, which bear on the efficiency and stability of the reserve system, are considered in Section V.

III. The Concept, Measurement, and Distribution of International Liquidity

The expansion of private international capital markets during the period since the SDR system was founded not only has greatly expanded the capacity of national authorities to obtain reserves through borrowing, but also has made international liquidity a much broader concept than international reserves. A country's international liquidity is generally defined as the resources that it has readily available for the purpose of financing balance of payments deficits or intervening in foreign exchange markets to stabilize the value of its currency. 2/ Accordingly, measures of international liquidity should include not only (1) official international reserve assets, but also (2) assets held by private domestic residents that are close substitutes for official reserves, (3) external

1/ See, for example, SM/88/49, "The Question of SDR Allocations - Further Consideration," February 24, 1988.

2/ See J. Marcus Fleming, "International Liquidity: Ends and Means," IMF Staff Papers, Vol. VIII, No. 3, December 1961; and "International Liquidity: The Issues," Annual Report, International Monetary Fund, Chapter 3, pp. 25-33, 1964.

resources that are readily available from international organizations and national authorities, and (4) external resources that are readily available from private sources.

The measurement of international liquidity was addressed in a paper discussed by the Executive Board last September. ^{1/} That paper provided quantitative information on the official components of international liquidity--namely, official reserve assets and the credit available from international organizations and national authorities. It was noted that an aggregate measure of these official resources, if constructed, would be difficult to interpret. Such an aggregate would be a mixture of conditional and unconditional resources with different degrees of liquidity, as well as a mixture of resources available for short-term and extended horizons. It was also emphasized, however, that the volume of external credit available from international organizations and monetary authorities is considerably smaller than--and provides only a moderate-sized supplement to--the volume of official reserve holdings. Thus, the main phenomenon that has made international liquidity a much broader concept than international reserves has been the extensive growth of private international capital markets. In association with this growth, private firms and individuals have increased their holdings of assets that are close substitutes for the official reserves of their domestic authorities, and the resources that are available to official sectors from external private sources have also expanded considerably.

Most Executive Directors agreed in last September's Board discussion that the extensive growth of private international capital markets has rendered ratios of reserves to imports less meaningful criteria for assessing the adequacy of international liquidity. Accordingly, some Directors expressed considerable interest in developing other quantitative criteria.

In response to this interest, the remainder of this section addresses several different quantitative approaches that might be contemplated for assessing the adequacy of international liquidity. The most direct approach would attempt to measure the liquidity available from private and official sources combined. On conceptual grounds, however, a direct approach to assessing the adequacy of the liquidity available from private sources would confront the same types of aggregation problems as attempts to measure the liquidity available from official sources. Moreover, even disregarding the conceptual ambiguities associated with aggregating different types of liquid resources, the data on private sources of liquidity are severely limited. In principle, the objective is to measure the resources that are available for potential use, whether in the form of private liquid assets already held or in the form of available external credit. In practice, data on liquid asset holdings are restricted primarily to information reported by banks, and there are virtually no

^{1/} SM/88/163, "International Liquidity and the Role of the SDR," July 27, 1988.

data on the extent to which external credit is available from private sources ex ante.

A second possible approach would be to attempt to assess the adequacy of international liquidity from data on the extent to which countries have actually expanded their external borrowing. ^{1/} This type of approach also confronts data limitations and conceptual difficulties. The available data are essentially limited to World Bank and OECD statistics on the external debts of developing countries, and to IMF statistics on externally held public sector debts, which cover both developing and industrial countries. It is thus not possible to analyze total external debt statistics for both the industrial countries and the developing countries, and it would be potentially misleading to restrict attention to public sector external debts since in many countries public sectors have assumed large amounts of private sector debts during the 1980s. Even without these data limitations, moreover, it would be difficult in concept to draw clear inferences about the adequacy of international liquidity from changes in outstanding stocks of external debt. A contraction or relatively small expansion of external debt does not always indicate a liquidity problem and, conversely, a relatively large expansion of external debt may be caused by a severe liquidity problem. In particular, countries with abundant liquidity may choose to reduce their debts, while countries facing severe liquidity problems may be forced to reschedule their interest payment obligations, thereby adding to the principal of their external debts.

A third approach to assessing the adequacy of international liquidity would look for symptoms or indicators of inadequate liquidity, such as a widespread increase in import restrictions or a marked increase in forms of international transactions that do not require liquidity (e.g., barter). One variant of this approach is to try to infer the adequacy of international liquidity from statistics on the volume of international trade and the pattern of real economic activity. Conceptually, the basis for this approach is the presumption that liquidity shortages give rise to import compression. The pitfalls that must be avoided are associated with factors that can cause imports to decline when liquidity is adequate, such as economic recessions that are not themselves the result of liquidity shortages, or contractions of world trade that are not related to liquidity shortages.

Recognition of the potential pitfalls might suggest that international liquidity could be assessed as inadequate if there was a widespread contraction of import volumes, or a slowdown in import volume growth, provided that the widespread contraction or slowdown was more pronounced than any associated contractions or slowdowns in both real GDP and export volumes. In focusing on import compression relative to

^{1/} The intent here would be to examine the liquidity available to each individual country and to assess the adequacy of global liquidity on the basis of whether a large number of countries faced inadequate liquidity.

changes in GDP, this approach avoids the pitfall of inferring a liquidity shortage simply from evidence of a business cycle downturn. By the same token, however, the approach has the shortcoming of understating any evidence of a liquidity shortage when real GDP is itself deflated by the liquidity shortage. In focusing on import compression relative to changes in exports, the approach takes account of the fact that a widespread slowdown in import volume growth that was associated with a widespread slowdown in export volume growth might reflect cyclical patterns in the expansion of world trade that had little to do with the adequacy or inadequacy of international liquidity. By contrast, countries affected by a liquidity shortage would have incentives to expand export volumes while compressing import volumes. Even though export growth must equal import growth for the world as a whole (apart from statistical discrepancies), it might be expected that an international liquidity shortage would give rise to a relatively rapid expansion of export volumes for many countries along with a widespread contraction or slowdown in import volumes. In this case the median percent change in import/GDP ratios would be negative, while the median percent change in export/GDP ratios would be positive.

Tables 1 and 2 provide statistics characterizing the behavior of import and export volumes relative to real GNP or GDP during the period 1980-86. 1/ The first two columns of Table 1 confirm that export and import volumes exhibited the same behavior for the world as a whole, within margins that can reasonably be taken to reflect statistical discrepancies and approximation errors. 2/ It is also notable from Table 1 that the volume of imports by developing countries in the aggregate declined during the 1982-86 period by nearly 5 percent per year on average relative to real GDP, or about 24 percent altogether, while the volume of exports, following sharp contractions during the 1980-82 period, expanded during 1983-86 by nearly 2 percent per year on average relative to real GDP. Relative to the trend in the ratio of trade volume to real GDP during the period 1970-81, the decline in developing country imports as a share of real GDP was about 5½ percent per year during 1983-86, while the increase in the export share of real GDP was about 1½ percent per

1/ The statistics have been constructed from the World Economic Outlook data base. While these data cover approximately 150 countries in each year of the 1980-86 period, compared with the much less complete coverage of IFS data on ratios of trade volumes to real GNP or GDP, a substantial amount of the WEO data has been constructed by the Fund staff.

2/ It may be noted that the data on exports and imports are converted into volumes (making use of unit value data) for individual countries and then summed to obtain totals for the country groups. The first two columns of Table 1 show that the discrepancy between the percentage changes in export volumes and import volumes for all countries was as large as -1.8 percentage points in one year but averaged only -0.2 percentage points for the 1980-86 period.

Table 1. Ratios of Aggregate Export Volumes and Import Volumes
to Real GNP or GDP for Major Country Groups, 1980-86

(Percent change from previous year)

	<u>All Countries</u>		<u>Industrial Countries</u>		<u>Developing Countries</u>	
	<u>Export Volume</u> ÷ Real GNP or GDP	<u>Import Volume</u> ÷ Real GNP or GDP	<u>Export Volume</u> ÷ Real GNP	<u>Import Volume</u> ÷ Real GNP	<u>Export Volume</u> ÷ Real GDP	<u>Import Volume</u> ÷ Real GDP
1980	-0.8	-0.9	3.6	-2.3	-7.5	4.0
1981	-1.0	-0.2	1.8	-3.8	-7.7	6.2
1982	-3.4	-1.6	-1.4	-0.1	-9.4	-5.0
1983	0.7	-0.1	0.0	1.6	0.9	-4.5
1984	4.0	4.4	4.8	7.1	3.1	-1.3
1985	-0.8	-0.4	1.5	1.4	-2.9	-4.4
1986	1.9	0.7	0.0	5.9	6.3	-8.7

Source: World Economic Outlook data base.

Table 2. Median Percent Changes Within Major Country Groups
in Ratios of Trade Volumes to Real GNP or GDP, 1980-86

	<u>All Countries</u>		<u>Industrial Countries</u>		<u>Developing Countries</u>	
	Export Volume ÷ Real GNP or GDP	Import Volume ÷ Real GNP or GDP	Export Volume ÷ Real GNP	Import Volume ÷ Real GNP	Export Volume ÷ Real GDP	Import Volume ÷ Real GDP
1980	-0.7	1.2	1.5	-1.9	-1.3	1.7
1981	-2.6	2.1	1.5	-4.0	-4.9	3.8
1982	-0.9	-1.0	0.6	-0.2	-1.3	-1.2
1983	2.0	-2.5	2.9	-0.7	1.0	-3.0
1984	4.5	1.6	5.7	5.4	4.4	0.7
1985	0.5	-0.4	1.8	2.6	-0.4	-2.7
1986	0.9	-4.3	-0.9	3.6	1.8	-5.5

Source: World Economic Outlook data base.

year. ^{1/} A qualitative similar story is apparent from Table 2, which shows the median percent changes in import and export volumes relative to real GNP or GDP. During the 1983-86 period, the median change in import volume relative to real GDP for the developing countries was substantially negative in three of the four years, and in all four years it was substantially less than the median percent change in export volume relative to real GDP. Indeed, for the global sample of all industrial and developing countries combined, the median change in import volumes relative to real GNP or GDP amounted to a contraction of 1.4 percent per year on average during 1983-86, while the median change in export volumes relative to real GNP or GDP was an expansion of 2 percent per year on average.

While the evidence indicates that the environment since 1982 has led many countries to expand exports and compress imports, a number of different factors may have contributed to this pattern of trade adjustment. Accordingly, it would not be valid to infer that the pattern of trade adjustment was entirely the result of a liquidity shortage. For example, the adjustment of trade volumes could have in part reflected a "correction" of unsustainable trade positions built up prior to 1982. Furthermore, to some extent the very rapid growth of the volume of imports in the United States--which on average exceeded the growth of export volume by 14 percentage points per year during 1983-86--may have had a significant "exogenous" influence on the trading patterns of many other countries.

These considerations point to important "identification" issues that would have to be resolved econometrically in any attempt to construct a strictly quantitative indicator of the adequacy of international liquidity based on the data on trade volumes and real GDP. A second econometric problem is to capture the two-way causation between import volumes and real GDP in order to avoid overestimating the adequacy of international liquidity by overlooking the extent to which liquidity shortages compress real GDP. To some, these difficulties may suggest that the pursuit of a strictly quantitative indicator of the adequacy of international liquidity is a hopeless task. To others, the numbers provided by Tables 1 and 2--or by other quantitative approaches--may provide useful input for informed judgments.

^{1/} For developing countries, the trend growth in the average of export and import volumes during 1970-81 was 5.7 percent per year, 0.5 percentage points greater than the trend growth in real GDP. Over the same period, the volume of world trade expanded by 5.5 percent per year while world real GDP expanded 3.7 percent per year.

IV. Implications for the Role of the SDR

The growth of private international capital markets has raised fundamental questions about the long-term global need for reserve supplementation. These questions reflect the following considerations.

First, as emphasized earlier, the expanded capacity of national authorities to obtain foreign exchange reserves by borrowing has made the concept of a quantitative reserve shortage more difficult to define in a meaningful way. While this may appear to raise doubts about the necessity of the SDR for maintaining reserve adequacy per se, it still leaves the questions of whether an increase in the supply of owned reserves through SDR allocation would improve the terms and conditions on which reserves are obtained, of whether a system that relies heavily on borrowed reserves has inherent vulnerabilities that could be mitigated through an infusion of SDRs, and of whether the SDR could contribute to world economic performance in ways that extend beyond the reserve system. These questions are addressed later.

Second, because international liquidity has become a much broader concept than international reserves, the overall amount of liquidity has become more relevant than the quantity of reserves alone both to the functioning of the international monetary system and as an element in the quantitative assessment of whether reserves need to be supplemented. Yet, the data limitations and conceptual ambiguities discussed earlier render it difficult to quantify directly the amount of international liquidity that is available to any particular country or group of countries. And furthermore, the types of indirect quantitative approaches that might be pursued in attempting to assess the adequacy of international liquidity at the global level, such as attempts to draw inferences from data on import and export volumes and real GDP, require considerable judgment if the numbers are to be interpreted in the context of significant "identification problems."

These considerations have contributed to an "impasse concerning the role of the SDR." ^{1/} At one level, this impasse raises the fundamental question of whether the existing allocation criterion has so lost its operational usefulness as to be inconsistent with the intent of making the SDR the principal reserve asset in the international monetary system. In general terms, however, and apparently in reflection of a growing consensus that the adequacy of international liquidity cannot be assessed by any simple quantitative approach on its own:

"Many Directors [have] endorsed a perspective whereby judgments about larger stocks of owned reserves in the form of SDRs might be evaluated with reference to

^{1/} See Jacques J. Polak, "The Impasse Concerning the Role of the SDR," in Wietze Eizenga et al. (eds.), The Quest for National and Global Economic Stability, Dordrecht: Kluwer Academic Publishers, 1988.

their likely effects on the functioning of the international monetary system and on the performance . . . of the world economy, while paying due regard to the attainment of the purposes of the Fund." 1/

This perspective is similar to views that prevailed during the formative stages of the SDR in regard to the question of how a "need" for reserves should be judged; recall the discussion in Section II.2. In this context, and without necessarily taking the existing legal provisions of the Articles of Agreement as constraining, the next section of the paper considers a number of possible approaches to invigorating the SDR in ways that could improve the functioning of the system and promote the purposes of the Fund.

V. Possible Approaches to Invigorating the SDR

It is convenient to group the possible approaches to invigorating the SDR under four broad headings: 2/ (1) ways in which the SDR could help to promote growth without discouraging adjustment; (2) ways to promote the use of SDRs by official or private entities and, in turn, contribute to greater exchange rate stability and more effective adjustment; (3) ways that the SDR might be used to provide an anchor against inflation; and (4) ways in which the SDR could improve the efficiency and stability of the reserve system. In examining these approaches, the staff has adopted a longer-term view in an attempt to facilitate discussion of the broad directions in which efforts to invigorate the SDR ought to move. For this reason, consideration of proposals has not been restricted to those that could be implemented overnight--or even to those that assume no change in current exchange arrangements.

1. Ways to promote growth without discouraging adjustment

The Fund has committed much of its energies and financial resources in recent years to helping debt-burdened developing countries formulate effective growth-oriented adjustment programs. It is now well recognized that growth and adjustment cannot be pursued effectively unless they are pursued together. It is also well recognized that the success of growth-oriented adjustment programs requires not only effective and appropriate policies in the indebted countries, but also an adequate supply of international liquidity for these countries and a supportive world economic environment.

1/ See "The Chairman's Summing Up at the Conclusion of the Discussion of International Liquidity and the Role of the SDR: Executive Board Meeting 88/140 - September 6, 1988," (September 16, 1988 - 88/192, p. 1).

2/ This necessarily involves a certain degree of arbitrariness for proposals that could fit under more than one heading.

The issue of using the mechanism of deliberate reserve creation to help promote economic growth in the developing countries has surfaced repeatedly over the past three decades. ^{1/} When the Second Amendment to the Fund's Articles of Agreement was being shaped by the discussions of the Committee of Twenty and their deputies, the major argument that held sway on this issue was that ". . . the SDR was still untried and that introduction of a link between SDR allocations and development finance ran the risk of weakening confidence in the SDR as a reserve asset. . . . A second objection was the risk of its inflationary consequences." ^{2/}

More recently, in Executive Board discussions of SDR allocations, one of the arguments put forth by Directors opposing an allocation has been the contention that the provision of unconditional liquidity through SDR allocation could act to discourage adjustment efforts by debt-burdened countries. In this context, several Directors have suggested that current circumstances in the debt-burdened countries call primarily for conditional--rather than unconditional--liquidity. A second argument by Directors opposing an allocation linked to development finance is that the needs of the developing countries do not constitute a global need. A counterargument is that failure to resolve the problems of debt-burdened developing countries could have major adverse economic consequences not just for one specific country group, but for all countries.

In contrast to previous link proposals, and in recognition of some of the objections to the previous proposals, a number of new proposals for linking the reserve creation mechanism to development objectives include provisions designed to prevent the use of allocated SDRs from discouraging adjustment. These provisions either specify particular uses for allocated SDRs (e.g., to provide a guarantee for the payment of principal or interest on external debt), or impose conditionality on the general use of some allocated SDRs, or re-establish a reconstitution requirement that would limit the duration of use of SDRs. As such, the restrictions typically placed on the use of SDRs under these proposed arrangements would be similar to those that are in place on the use of resources obtained from other official sources of reserves and liquidity (e.g., from the Federal Reserve's swap arrangements and from the European Monetary Cooperation Fund). ^{3/}

Most of the recent proposals for linking the reserve creation mechanism to the objective of promoting economic growth in developing countries have fallen into two broad categories: those relating to securitization and credit enhancement; and those that either would make access to allocated SDRs conditional on a review by the Fund or some other

^{1/} See Rhomberg, op. cit.

^{2/} See Margaret Garritsen de Vries, The International Monetary Fund 1972-1978: Cooperation on Trial, Washington, D.C.: The International Monetary Fund, 1985, p. 208.

^{3/} Restrictions on the use of liquidity available from official sources are discussed in Section V.4.

agency, or would limit the duration of use of the SDR. These two categories will be discussed in turn. It may be noted that proposals to impose conditionality on some SDRs but not on all SDRs would recognize that SDRs are to some extent substitutable for conditional resources and yet are also fundamentally complementary to conditional resources.

a. Securitization and credit enhancement

Some recent proposals have advocated a new allocation of SDRs to establish a trust fund that would be used to guarantee certain external debt-servicing payments of indebted developing countries. These proposals have been motivated by the desire to reduce some of the difficulties that heavily indebted countries have faced in restoring normal market access, which have reflected in part the perceptions of market participants concerning the credit risks involved in financial transactions with indebted developing countries. ^{1/} It has been argued that the use of new collateralized financial instruments to securitize existing and new bank claims on the indebted developing countries could play a role in reducing these credit risks. The securitization of bank claims--that is, the conversion of such claims into readily negotiable bonds that could be held by either bank or nonbank investors--could be facilitated by establishing collateral that would be used to partially guarantee future interest payments or principal repayments on the new bonds. Mexico, for example, undertook a securitization scheme which collateralized the principal of new bonds. Such a collateralized securitization can result in a reduction in contractual indebtedness since investors will exchange existing claims for new claims bearing a smaller face value when the prospect of future payments is more certain on the new claims. Moreover, it is also possible that the availability of securitized and collateralized claims will stimulate nonbank investor interest in the external obligations of developing countries. Both the reduction in contractual indebtedness and the possible increased involvement of nonbank investors have been viewed as means to foster increased access to international financial markets for countries with debt-servicing difficulties.

Several proposals have recently been put forth for using the SDR system to facilitate this process of credit enhancement and securitization. In February 1988, the Institute of International Finance (IIF) proposed that the outstanding stock of allocated SDRs be doubled, and that heavily indebted countries use their allocations to acquire U.S. government bonds that would serve as collateral either for the principal or interest payments on debt conversion (e.g., from external bank debt to bonds) or for new borrowings from banks. ^{2/} Thus, SDR allocation would

^{1/} These perceived risks were addressed in greater detail in SM/88/49, "The Question of SDR Allocations - Further Consideration," February 24, 1988.

^{2/} "Proposal in Support of an Allocation of SDRs," Institute of International Finance, February 12, 1988.

lead to an increase in debtor country reserves which would be pledged for debt service.

As another example, the French authorities have proposed to create a fund with the IMF, established by having the industrial countries set aside their share of a new allocation of SDRs, to guarantee certain payments from middle-income, heavily indebted countries. 1/ The fund would operate, for some initial period, in support of menu items that contain an element of debt reduction. Presumably, the fund could be used to collateralize interest payments (or any other form of remuneration to banks) under a variety of arrangements for reducing the contractual levels of either principal or interest payments. Collateralization of dividend payments on equity swapped for debt, among other debt reduction schemes, could potentially be considered within the terms of reference of the French proposal. Access to this SDR fund by developing countries would be conditional on the establishment of IMF-endorsed economic programs. An examination of this proposal shows that it could be implemented within the framework of the Fund's Articles, under the following conditions. The guarantee fund would be established by a decision of the Fund as an administered account under Article V, Section 2(b). Its resources would be generated by a conversion of allocated SDRs into currencies, since an administered account cannot hold SDRs. It would be separate from all other accounts of the Fund and would not impose any obligation on these other accounts; no guarantee could be provided by the Fund's General Resources Account. Use of SDRs by contributing countries for purposes of the guarantee mechanism could take place either upon the establishment of the account or at a later date, for instance, when the guarantee becomes due.

Proponents of some of the proposals for using SDRs to collateralize certain types of financial transactions have argued that, as a secondary benefit, such proposals could enhance the efficiency of the financial management of developing countries. For example, since the central bank debts of many developing countries carry interest rates linked to the London Interbank Offered Rate (LIBOR), variation in market interest rates are quickly reflected in changes in interest payments. One means of limiting a country's exposure to interest rate risks would be to make use of market-related hedging instruments. Interest rate caps could be used to limit a country's exposure to interest rate movements beyond a certain level, whereas Eurodollar financial futures contracts could provide a means of locking in a particular level of the interest rate. 2/ To the extent that allocated SDRs, along with resources obtained from other sources, facilitated the use of such hedging instruments, this could

1/ This proposal was discussed by French President Mitterrand in a speech before the United Nations in September 1988.

2/ For discussion of the use of these instruments, see SM/88/233, "Managing Financial Risks in Indebted Developing Countries," September 26, 1988.

enhance the ability of indebted developing countries to employ more efficient external debt management techniques: 1/

b. Conditional SDRs and the reconstitution requirement

Another set of proposals for linking growth, adjustment, and SDRs involves either making the use of some portion of allocated SDRs subject to conditionality or reimposing a reconstitution requirement on the use of SDRs. One class of such proposals has focused on arrangements for a post-allocation redistribution of SDRs from countries with a lesser need for additional reserves at the time of the allocation to those with a relatively weak reserve position. 2/ Such redistribution has been viewed as a means of both increasing access to conditional resources for countries undertaking adjustment programs and allaying concerns that SDR allocations would undermine adjustment efforts or prove inflationary.

Regardless of whether post-allocation adjustment is itself considered desirable, the different mechanisms suggested in the various post-allocation redistribution proposals could conceivably be applied in other arrangements 3/ and may thus be of general interest. Under a proposal put forward by Mr. de Groote, and reiterated by Governor Maystadt at the 1988 Annual Meetings of the Fund (the Belgian proposal), SDRs would be transferred to the Fund for use in assisting countries with Fund-supported adjustment programs. Since the Fund cannot borrow SDRs, the transfer of SDRs to the Fund would involve the Fund borrowing currencies from creditor countries in amounts equivalent to the SDRs agreed upon, and then having the Fund purchase SDRs from participants. Under the French proposal (put forward by former Executive Director Mr. de Maulde), creditor countries would lend SDRs directly to certain developing countries subject to an appraisal by the Executive Board of the country's need for reserves and its economic policies. Since the lending of SDRs would occur directly between members and would not involve the Fund in any new financing arrangements, such proposals would not need parliamentary approval.

By contrast, under the proposal put forward by former Executive Director Mr. Sengupta, developing countries with the greatest need to rebuild reserves would receive transfers of additional SDRs that were not

1/ It should be noted, however, that the use of these instruments requires either the payment of up-front fees (e.g., with interest rate caps) or the maintenance of margin requirements (e.g., with financial futures).

2/ These proposals are examined in SM/86/154, "Proposals for Post-Allocation Adjustment in the Distribution of SDRs," June 27, 1986, and "Further Consideration of Issues Relating to Post-Allocation Adjustment in the Distribution of SDRs," to be issued in early 1989.

3/ In particular, the SDRs involved in such arrangements need not be recently allocated and could be contributed by creditor countries in amounts that had little relationship to the cumulative allocations of the creditor countries.

subject to conditionality. Instead, the developing countries would have to replenish or reconstitute any SDRs which they used by the end of some specified time period.

The application of conditionality or the reinstatement of a reconstitution requirement on those SDRs that were involved in either a post-allocation redistribution scheme or some other arrangement would in certain respects make the conditions under which such SDRs could be used more similar to the conditions maintained on access to liquidity from other official sources--either by restricting the duration of use (e.g., through a reconstitution requirement) or by restricting the types of activities that could be supported by such use. Those opposed to introducing restrictions on the use of the SDR have argued that such restrictions would reduce the attractiveness of the SDR as a reserve asset by limiting the ability of countries to flexibly manage their SDR positions in a timely manner. In contrast, proponents have noted that such restrictions would help ensure that the use of allocated SDRs would support growth-oriented adjustment efforts and avoid any potential inflationary consequences.

2. Ways to promote the use of SDRs by official or private entities

As embodied in Article VIII, Section 7 of the Fund's Articles of Agreement, and again in Article XXII, one of the objectives introduced by the Second Amendment of the Articles is to make the SDR ". . . the principal reserve asset in the international monetary system." In this context, a number of major steps have been taken over the past decade to make the SDR more attractive to hold and to widen the scope for transactions in SDRs between willing parties.

From one perspective, based partly on the fact that there has been no need to use the designation mechanism since August 1987, the interest rate and other characteristics of the SDR have now apparently become broadly as attractive, on balance, as the characteristics of other reserve assets. From another perspective, however, a survey of the reserve management practices of monetary authorities suggests that the SDR is considered to be less liquid and usable than other reserve assets. ^{1/} In light of the failure during the fourth and fifth basic periods to garner the requisite support for an SDR allocation, the share of SDRs has dwindled to less than 4 percent of the global stock of non-gold reserves--a development hardly consistent with the objective of making the SDR the principal reserve asset.

A number of proposals have been made for promoting the use of SDRs by official or private entities. This section concentrates on analyzing two particular classes of proposals that might have important consequences

^{1/} See SM/87/72, "The SDR in the Reserve Management Practices of Monetary Authorities," March 17, 1987.

for the international monetary system if they actually were effective in achieving their objectives. These consist of proposals for facilitating transactions in SDR-denominated instruments, and proposals to adopt substitution and asset settlement mechanisms for the purpose either of imposing discipline on countries with large payments imbalances or of reducing the costs imposed on others by reserve currency countries with large payments imbalances. The importance of re-examining these two classes of proposals was emphasized by the Governor for Japan at the 1988 Annual Meetings of the Fund, who urged that "a study be made on improving the SDR's characteristics and making it an easily usable international reserve currency . . .," and who suggested that the analysis should address "what modalities might be possible to expand the scope of SDR use, including use by the private sector," as well as "ways of diversifying reserve currencies to complement the dollar's key role, thereby facilitating the financing of resources for market intervention and dispersing the exchange risk of reserve currencies." 1/

a. Proposals for facilitating transactions
in SDR-denominated instruments

The possible use of SDRs in exchange market intervention is addressed in a paper under preparation by the Treasurer's Department. The discussion here focuses on the more general issue of facilitating transactions among private and official entities in SDR-denominated instruments.

One of the major obstacles to expanding the use of the SDR by official entities in exchange market intervention and other transactions is the fact that commercial banks and other private entities are not authorized under the Fund's Articles of Agreement to hold "official SDRs." A closely related obstacle is the fact that there is no broad market outside the Fund in which official SDRs can be exchanged either for other reserve currencies directly or for instruments that are negotiable for other reserve currencies and thus in practice usable for intervention.

A number of proposals have been made for making official SDRs more usable in conjunction with measures to provide greater incentives for commercial banks or other entities to create and use SDR-denominated instruments, which central banks can also hold and use. One class of proposals has concentrated on promoting the private use of SDR-denominated instruments through the establishment of some form of clearinghouse mechanism. 2/ Under one plan, official SDRs could be used as clearing balances for settling transactions in other SDR-denominated

1/ Statement by the Honorable Satoshi Sumita, September 27, 1988.

2/ See Warren L. Coats, "The SDR as a Means of Payment," IMF Staff Papers, September 1982, pp. 422-36; and Peter B. Kenen, "Use of the SDR to Supplement or Substitute for Other Means of Finance," in George M. von Furstenberg (ed.), International Money and Credit: The Policy Roles, Washington, D.C.: International Monetary Fund, 1983.

instruments--henceforth, "unofficial SDRs;" such a mechanism would not require authorizing private entities to hold official SDRs. 1/ Central banks, however, could hold or create unofficial SDRs, and could intervene to buy or sell these assets in foreign exchange transactions with commercial banks or other private entities. Moreover, by themselves engaging actively in transactions in unofficial SDRs, central banks could stimulate the holding and use of unofficial SDRs by private entities. 2/

As an alternative to establishing a clearinghouse involving the official SDR, Mr. Polak has suggested that exchange market intervention and other transactions denominated in SDRs could be promoted through the issuance of SDR certificates backed by official SDRs. 3/ This presumably could be achieved without amendment of the Articles of Agreement if the SDR certificates were issued by an institution prescribed as an "other holder" of SDRs, such as the Bank for International Settlements (BIS). Polak suggests, in particular, that:

. . . the BIS (which holds SDRs) could accept the function of trustee in the sense that it would stand ready to acquire SDRs from central banks, giving them SDR certificates in return. These certificates would carry the SDR interest rate and would be freely negotiable, so that the central bank could sell them against currency in the market. The price of these certificates would be automatically supported at a level extremely close to the official SDR price . . . by the fact that members of the Fund (and others entitled to hold SDRs) could buy the certificates in

1/ See Coats, *ibid.* Under the Coats plan, central banks would deposit official SDRs with the clearinghouse (which would be an authorized holder, perhaps the IMF) and would also open accounts in unofficial SDRs for their commercial banks. The process of settling transactions in unofficial SDRs among commercial banks would involve adjustments in the net positions in unofficial SDRs of commercial banks vis-à-vis their central banks, along with adjustments in the net positions in official SDRs of central banks with the clearinghouse.

2/ Under the plan proposed by Kenen, *op. cit.*, it would be necessary to authorize private entities to hold official SDRs, which would require amending the Articles of Agreement. The Kenen plan, however, would simplify the settlement process and would not require central banks to adjust their own positions in official SDRs as part of the process of settling transactions in unofficial SDRs among commercial banks. This would be achieved by having commercial banks maintain deposits of official SDRs at the clearinghouse, which in turn would enable all transactions in unofficial SDRs to be settled with official SDRs on the books of the clearinghouse.

3/ See Jacques J. Polak, "The Impasse Concerning the Role of the SDR," *op. cit.*, p. 185.

the market and then exchange them for official SDRs at the trustee." 1/

It is important to note in this context that the volume of unofficial SDRs need not be limited to the volume of SDR certificates created by the trustee or to the volume of official SDRs. National monetary authorities could promote the development of unofficial SDRs even in the absence of additional allocations of official SDRs by buying and selling SDR certificates in foreign exchange interventions and in other transactions with private entities. The World Bank and other official institutions could also contribute to this process by denominating their borrowings in SDRs, and the Fund could move over time toward basing its operations fully on the SDR. 2/ The issuance of SDR certificates, together with other actions by national authorities and international institutions to promote their holding and use, could represent positive steps toward making the SDR the principal reserve asset in the international monetary system.

In contemplating the various measures for providing an impetus toward making the SDR the principal reserve asset, it should be noted that private market participants have not found it sufficiently attractive to develop a large market for SDR-denominated instruments on their own. The strength of the case for considering official measures to facilitate the development and use of SDR-denominated instruments depends on how effectively a reserve system based principally on the SDR could promote the broader objective of improving the functioning of the international monetary system.

b. Proposals for substitution and asset settlement mechanisms

The issue of whether greater use of the SDR could improve the functioning of the system focuses attention on proposals for introducing substitution mechanisms and asset settlement schemes for the purpose either of imposing greater discipline on countries with large payments imbalances or of reducing the costs imposed on others when reserve currency countries run large payments imbalances. Such proposals were first considered by the Fund in the early 1970s, when the staff became engaged in sketching the possible scope and content of a reformed international monetary system. 3/ In the wake of the decision taken by the U.S. authorities in August 1971 to suspend the convertibility of officially held U.S. dollar balances into gold, one of the components of reform considered by the Fund staff was the reduction of reserve currency

1/ Ibid.

2/ See Jacques J. Polak, Thoughts on an International Monetary Fund Based Fully on the SDR, International Monetary Fund, Pamphlet Series No. 28, Washington, D.C., 1979.

3/ See "Reform of the International Monetary System: A Sketch of Its Scope and Content" (March 7, 1972), reprinted in de Vries (1985), op. cit., Vol. III, pp. 3-15.

holdings primarily by means of "consolidation" into SDRs. At that time, it was perceived that: "In order to bring about consolidation, the Fund would . . . have to have the power to make special issues of SDRs against balances of dollars (and other reserve currencies) tendered by members." 1/ Discussion of the issue continued during the deliberations by the Committee of Twenty in 1972-74--with reference to "consolidation" replaced by reference to "substitution"--but ended inconclusively. When the issue emerged again during the period 1978-80, the discussion shifted to the more moderate idea of absorbing part of members' foreign exchange holdings (as distinct from earlier proposals for near-complete substitution), and it was envisaged that substitution could be achieved through the use of SDR-denominated claims, thus avoiding a need for special allocations of official SDRs. 2/

Throughout these discussions, proposals for consolidation or substitution mechanisms were seen as remedies that would strengthen control over the global stock of international reserves by establishing a system with a single international monetary asset whose supply could be regulated by the international community. 3/ Accordingly, the discussion of mechanisms for substituting SDR-denominated assets for existing balances of dollars and other reserve currencies was accompanied by a discussion of "arrangements which would insure that further increases in reserve currency balances are avoided (except where some modest increase is considered necessary to raise working balances)." 4/ It was perceived that such arrangements would involve "asset settlement" (initially termed "asset financing")--either mandatory or "on demand"--of payments imbalances by reserve currency countries. Reserve currency countries would thus stand ready to use their holdings of SDRs, gold, or reserve positions in the Fund--and perhaps to draw on negotiated credits denominated in SDRs--to purchase balances of their currencies acquired by the authorities of other countries. In the discussion of such arrangements, the obligation of reserve currency countries to settle their liabilities with reserve assets was generally taken to apply only to liabilities in excess of initial or predetermined levels. 5/

By contrast with discussions of international monetary reform during the period 1971-80, current discussions of improving the functioning of the international monetary system appear to be less concerned with seeking mechanisms to control the global stock of international reserves and more concerned either with imposing discipline on countries with large external imbalances or with diversifying official reserve holdings as a means of

1/ Ibid, p. 6.

2/ See Kenen, op. cit., p. 350.

3/ See Rhomberg, op. cit. Such proposals were also seen as adding more "symmetry" to the system.

4/ See "Reform . . ." (1972) as reprinted in de Vries (1985), op. cit., Vol. III, p. 8.

5/ See International Monetary Reform: Documents of the Committee of Twenty, International Monetary Fund, Washington, D.C., 1974, pp. 126-7.

managing exchange risk. The relevant issues, accordingly, are whether substitution and asset settlement schemes could either provide effective mechanisms for imposing discipline on countries with large imbalances or useful mechanisms for managing exchange risk. In the context of managing the exposure of reserve holdings to exchange risk, the main concern is the exchange risk associated with uncertainty about the policies and macro-economic prospects for the reserve currency countries.

The analysis of these issues should recognize at the outset that while a substitution mechanism would allow countries to diversify their official reserve holdings and thereby obtain more desirable exposures to exchange risk, it could not magically reduce the system's total exposure to exchange risk but would rather involve a redistribution of risk among countries and international organizations. In this context, it is important to recall that the discussions of a substitution account during the 1978-80 period floundered over the issue of maintaining the "financial balance" and long-run solvency of the account in an environment of exchange rate uncertainty. There was concern, in particular, over the prospect that interest payments by the United States on dollar assets held in the substitution account might not be as large as the interest obligations of the account on its SDR-denominated liabilities. Accordingly, if the dollar failed to appreciate against the SDR sufficiently to generate compensating changes in the market valuations of the account's assets and liabilities, the SDR value of the account's dollar holdings could fall below the value of its obligations to its depositors. This possibility suggested that the long-run solvency of a substitution account could be impaired unless financial hedging arrangements were made *ex ante* to eliminate the account's exposure to exchange rate fluctuations. But if the account itself assumed no exposure to exchange risk, any net gains that one country might realize *ex post* from having used the substitution mechanism to diversify its official reserve holdings would be associated with net losses by other countries.

Even so, a substitution account might still be considered attractive if it functioned as a mechanism for limiting the magnitude of the net valuation gains or losses that those countries pursuing "appropriate policies" would be likely to experience on their official reserve holdings. In this context, as one way of maintaining financial balance, the reserve currency countries whose liabilities were deposited into the substitution account might be required either to explicitly express or to implicitly redenominate their liabilities to the account in SDRs, and to make interest payments consistent with that redenomination. Under this method, the exchange risk exposures of the reserve currency countries would be increased and the exchange risk exposures of other countries

would decline. 1/ Other methods for maintaining financial balance could also be considered. Although it might remain difficult to agree on how to distribute the exchange risk exposures associated with maintaining financial balance, better financial instruments are now available for hedging risks at costs that can be tied down in advance. By combining a one-time option to use the substitution mechanism with a mechanism for asset settlement of subsequent payments imbalances, or by providing an open-ended option to use the substitution mechanism repeatedly, changes in relative exchange risk exposures could be maintained over time.

The possibility of using substitution and asset settlement mechanisms to redistribute exposure to exchange risk in this manner raises a number of questions. One philosophical question is whether the redistribution of risk exposure toward the reserve currency countries would be desirable in circumstances in which the reserve currency countries (i.e., the countries whose liabilities had been deposited into the substitution account) pursued appropriate policies while other countries pursued inappropriate policies. Under such circumstances, the cost (measured in reserve currencies) to the reserve currency countries of maintaining the financial balance of the substitution account would decline if the reserve currencies appreciated in value, but could increase if the reserve currencies depreciated. 2/ The latter outcome might be experienced, for example, if inappropriate fiscal expansions were undertaken by countries other than the reserve currency countries. By the same token, inappropriate fiscal expansion by reserve currency countries might appreciate the reserve currencies and have the perverse effect of reducing the burden of the reserve currency countries' debts to the substitution account.

A second question is whether substitution and asset settlement mechanisms, in the presence of the large menu of market mechanisms that already exist for altering risk exposures, could actually be effective in making reserve currency countries increase their overall exposures to the exchange risk associated with their own policies, or would really be

1/ This statement assumes that each country measures its exposure to exchange risk in terms of possible variation in the home-currency-equivalent value of its stock of net claims on other countries. From this perspective, given that the U.S. dollar has a 40 percent weight in the SDR basket, the United States would only be exposed to 60 percent of the risk in dollar exchange rates.

2/ As noted earlier, if the reserve currency countries were made responsible for maintaining the financial balance of the account, they would have to pay the same amount of interest on their liabilities to the account as the account was obliged to pay on its liabilities. In this situation, anticipated changes in exchange rates--as predicted ex ante by interest rate differentials and forward premiums--would not give rise to unexpected changes in the costs of maintaining financial balance, but unanticipated changes in exchange rates would.

necessary to provide ample opportunities for other countries to reduce their exposures.

Another related issue is whether substitution and asset settlement mechanisms would be effective in imposing discipline on countries with large payments imbalances. Here it should be recognized that most industrial countries can borrow within broad limits to obtain whatever reserve assets might be required for settling their payments imbalances under an asset settlement mechanism, or for purchasing their currencies from a substitution account. Thus, as long as governments are free to issue liabilities denominated in the currencies of other countries, or to obtain foreign currencies borrowed abroad by domestic banks or other residents, substitution and asset settlement mechanisms may lack the teeth required to impose discipline on countries with large payments imbalances.

These considerations suggest that, to a large extent, the prospects for substitution and asset settlement mechanisms to achieve their objectives would depend on the willingness of countries to impose discipline on themselves. Substitution and asset settlement mechanisms can be viewed as "rules" under which countries with large balance of payments deficits would essentially act to accept the exchange risk exposures created by their own deficits. The international financial system, however, does not at present provide mechanisms for enforcing such rules.

3. Ways that the SDR might be used to provide an anchor against inflation

In recent years, as the process of international policy coordination has developed, monetary policy strategies in the major industrial countries--in association with their primary objective of promoting price stability--have given greater weight to pursuing exchange rate objectives. This, in combination with the still vivid memory of the inflation excesses of the 1970s, has rekindled interest in two key questions. One is whether the international monetary system needs a more explicit anchor against inflation. Of particular relevance in this regard is whether present international arrangements are conducive to early and strong adjustment efforts, especially on the part of countries whose inflation and interest rate performance has important systemic influence. The second question is whether the SDR could serve as such a "nominal anchor."

It is useful to think of inflation as a problem that generally develops when nominal demand expands too rapidly relative to the growth rate of real output. Although it is difficult to control real output growth accurately in the short run, nominal anchors can succeed over the medium term by following a strategy of keeping nominal demand growth in line with the trend growth of real output.

In the early days of the Bretton Woods regime, the U.S. dollar provided a nominal anchor for the international monetary system as the growth of U.S. nominal demand was kept broadly in line with U.S. real

output expansion. In the late 1960s, when the growth of U.S. nominal demand outstripped the growth in U.S. real output, the dollar's attraction as a nominal anchor for the system declined. More recently, the deutsche mark has essentially served as the anchor for the European Monetary System by virtue of the emphasis that the German authorities have placed on achieving price stability.

Stabilizing the exchange rates of national currency units against the SDR would stabilize the national currency prices of goods relative to the SDR price of goods. This by itself, however, would still leave the average rate of inflation--measured either in national-currency prices or in SDR prices--undetermined. Nevertheless, this form of exchange rate stabilization could reduce the average rate of inflation if: (i) high-inflation countries adapted their behavior toward that of low-inflation countries (much in the manner of convergence of inflation rates in the European Monetary System); and (ii) stronger surveillance rules applied to the SDR countries themselves so as to ensure that they truly behaved as members of a "low-inflation club." The more precise definition of the responsibilities of these latter countries could be a matter for further study.

Another tack would be to consider mechanisms that make the level of nominal demand in member countries responsive to the stock of SDRs. The notion that the SDR should be seen, in part, as an instrument for helping "avoid economic stagnation and deflation as well as excess demand and inflation in the world" is already contained in Article XVIII Section 1(a) of the Fund's Articles of Agreement. One such mechanism would involve establishing a fractional SDR system under which a certain proportion of any expansion of global reserves had to be held in the form of SDRs. 1/ By conducting open market operations in SDRs, it would then be possible, in theory, to alter monetary conditions and thereby influence the level of nominal demand. In practice, the effectiveness of this approach would depend in part on the mandate given the Fund to function as a supranational central bank.

A more limited approach--and one that would seek both to better integrate SDR allocation with Fund surveillance and to render the exercise of surveillance more symmetric--would be to make SDR allocation conditional on a Fund evaluation of appropriate policies toward nominal demand and inflation. 2/ In this regard, one might envisage a two-stage

1/ This idea was discussed in a speech by former Managing Director Johannes Witteveen, "The Control of International Liquidity," given before the Conference Board in Frankfurt in October 1975, and published in IMF Survey, Vol. 4 (October 28, 1975), pp. 313-16.

2/ It may be noted that while Article XVIII Section 1(a) refers explicitly to the strength of demand, the conditional allocation of SDRs would require amending the present provisions of the Articles of Agreement.

allocation process. The first stage would operate as at present, with due regard to the "long-term global need," and would determine the appropriateness and size of an overall allocation. In the second stage, individual countries' receipt of their allocations (still based on quotas) would be subject to Executive Board surveillance, conducted perhaps in the context of regular Article IV discussions. ^{1/} If the country's policies, particularly as regards their compatibility with good price performance, were judged to be appropriate, it would receive its allocation. If not, the individual country's allocation would be delayed until a subsequent review established such compatibility. All Fund members--including reserve-center countries--would be subject to this two-stage allocation process. In brief, the basic idea behind such a proposal is to provide more concrete assurance that inflation objectives are not compromised in the process of supplementing the long-term global need for reserves, albeit with the effect of compromising the present "unconditional" nature of SDR allocation (but not of use once an allocation has been received).

4. Ways to improve the efficiency and stability of the reserve system

As noted earlier, international liquidity is currently generated through a variety of private and official channels. Three characteristics of the reserve and liquidity system have influenced its efficiency and stability. First, the system has been characterized by sharp differences in the terms under which reserves and liquidity have been made available to different countries. The most creditworthy countries typically face the lowest cost of acquiring reserves. In contrast, those countries with limited access to international financial markets have often faced higher implicit costs of generating reserves through current account adjustment. Second, the reserve system has been prone, at times, to abrupt changes in the conditions under which liquidity and reserves have been made available to individual countries or groups of countries. In 1982, for example, access to international financial markets was sharply curtailed for many indebted developing countries following an extended period of relatively unrestricted access to these markets. Third, although official intervention in foreign exchange markets has at times played a major role in the expansion of reserves, the system has produced a continuing decline in the shares of reserves and liquidity provided through official channels--i.e., SDRs, reserve positions in the Fund, and official credit and swap arrangements. As a result, the stability of the reserve system has become increasingly dependent on the stability of private financial markets.

These characteristics of the international reserve and liquidity system have raised the question of whether the SDR can be used to improve its efficiency and stability.

^{1/} This approach would require amending the present provisions on SDR allocations to individual participants, in particular regarding Article XIX, Section 3.

a. The cost and availability of international reserves and liquidity

Many countries have found borrowing from private international financial markets to be an efficient and flexible source of reserves and liquidity. For these countries, the net cost of reserves is reflected in the difference between the loan rate they pay and the return they earn on their reserves assets. ^{1/} It has been estimated that the net interest cost of holding reserves for different country groups with general access to credit markets has tended to decline throughout the period 1978-87. ^{2/}

At the same time, private capital markets have proven to be neither a stable nor a reliable source of liquidity for all countries. Many countries have experienced abrupt changes in the costs and availability of private sources of liquidity at times when adverse macroeconomic developments have created a relatively strong need for reserves. In addition, it has been argued that access to borrowed reserves can sometimes be lost for reasons related not directly to a country's policies but rather to the "contagious" effects of developments in neighboring countries or in countries with similar economies. Moreover, experience

^{1/} The interest cost of a country's external borrowing typically includes a premium reflecting the perceptions of market participants regarding the risks of lending to that country. The factors that are viewed to influence perceptions of a country's ability to service its external debt include the size of its existing external obligations, the scale and scope of its exports, and the state of the world economy. As a result, perceptions of creditworthiness and the net cost of reserves tend to vary among countries and over time.

^{2/} See SM/88/49, "The Question of SDR Allocations - Further Consideration," February 24, 1988. Three country groups with continuous market access were considered: industrial countries that had borrowed relatively limited amounts of foreign currencies (Group I); industrial countries that had borrowed significant amounts of foreign exchange (Group II); and developing countries with general access to international financial markets. For the Group I countries, the cost of holding reserves (as measured by the difference between the country's borrowing cost and the yield on U.S. Treasury bills) is quite limited. This reflects the fact that these countries tend to hold their foreign exchange reserves in the form of the official market obligations of other major countries within the group. (Differences between the yields on the public sector liabilities of countries within the group, when adjusted for the anticipated exchange rate changes that are reflected in forward exchange rate premia, are limited.) For the Group II countries, the average cost of holding reserves was estimated to have declined from 0.9 percent per annum in 1978 to 0.2 percent per annum by 1987. During the same period, the cost for the Group III countries fell from 1 percent to 0.6 percent. These calculations abstract from the costs of reserve management and borrowing operations, as well as any gains or losses associated with unanticipated exchange rate movements.

since 1982 suggests that private funds may dry up for prolonged periods; re-establishing voluntary access to private financial markets may take considerable time.

In addition to borrowing from international markets, countries obtain reserves through current account adjustments. 1/ Since 1982, many developing countries, especially those with only limited access to international financial markets, have acquired reserves by adopting policies designed to improve current account positions (recall Tables 1 and 2). The implicit cost of generating additional reserves by this means can be measured by the domestic absorption that must be foregone to produce an improvement in the current account balance. While these costs have naturally varied across countries and with the state of the international economy, they are generally viewed as much higher than those associated with borrowing to obtain reserves.

Under current arrangements, international liquidity has also been generated through foreign exchange market intervention and through bilateral or multilateral credit arrangements. In 1987, for example, foreign exchange market intervention directed toward achieving exchange rate objectives played a particularly important role in the expansion of non-gold reserves, especially for the industrial countries; official purchases of dollars by countries other than the United States considerably exceeded the net sales of foreign exchange against dollars by the U.S. authorities. Again, however, it would be misleading to regard intervention as a stable source of reserve growth since it has tended to be episodic and often partially or fully reversed once exchange market conditions have changed.

As noted earlier, official resources available from international and regional organizations and monetary authorities are another source of international liquidity. These resources include those available from the Fund, the General Arrangements to Borrow (GAB), the financial assistance facilities of the European Monetary Cooperative Fund (EMCF), and other borrowing and reciprocal currency arrangements between monetary authorities. 2/ The degrees of conditionality attached to these resources, and the time periods for which they are made available,

1/ Reserves could also be generated through changes in official grants and loans and foreign direct investment flows, but these are often difficult to adjust in the short term.

2/ The sizes of these various arrangements at the end of 1987 were discussed in SM/88/163. "International Liquidity and the Role of the SDR," July 27, 1988.

differ considerably. 1/ The interest costs of borrowing from official sources, under current arrangements, are typically at or near market rates. 2/

The financial resources made available by monetary authorities and international and regional organizations have expanded more slowly than non-gold reserve holdings during the 1980s. At the end of 1979, the resources available through the Fund, 3/ the Federal Reserve's reciprocal currency arrangements and the EMCF facilities 4/ totaled about SDR 114 billion, approximately 42 percent as large as the volume of non-gold reserves. At the end of 1987, in contrast, these resources amounted to SDR 153 billion, or only about 30 percent as large as the volume of non-gold reserves.

1/ While certain of these resources are available with few prior restrictions, they typically have a relatively short maturity. For example, drawings on the very short-term facility of the EMCF are for only three-and-one-half months, and the reciprocal lines of credit of central banks with the Federal Reserve have a duration of three months. Other official credits are available for longer periods, but only following negotiations and/or subject to some form of conditionality. The Fund's resources (apart from reserve positions) can be obtained under varying degrees of conditionality. The General Arrangements to Borrow can be activated only with the concurrence of the participants and is to be used solely to forestall or cope with an impairment of the international monetary system. Similarly, the resources from the medium-term financial assistance facility of the EMCF are subject to conditionality.

2/ When the Fund's borrowed resources are made available to members under conditional lending, they pay a rate of charge equal to the Fund's borrowing cost plus a small margin; in 1987/88, the average rates of charge on purchases under the supplementary financing facility and under the policy on enlarged access were 8.7 percent per annum and 7.39 percent per annum, respectively. Ordinary Fund resources are subject to a lower rate of charge than borrowed resources, but are again available only under conditionality; in 1987/88, this basic rate of charge was initially set at 5.8 percent per annum, but was raised to 6.15 percent per annum in the fourth quarter and included further adjustments for burden sharing. The debtor and credit interest rates applying to very short-term financing operations under the EMCF are a weighted average of the most representative domestic money market interest rates in those countries whose currencies make up the European Currency Unit (ECU) basket. Operations under the Federal Reserve's swap arrangements typically involve the use of three-month U.S Treasury bills or short-term interbank rates.

3/ This is taken as being represented by the sum of aggregate Fund quotas less reserve positions in the Fund, the General Arrangements to Borrow, and other borrowing arrangements.

4/ This is taken as including the renewable portion of the very short-term facility for European Monetary System members, the short-term monetary support facility, and the medium-term financial assistance facility.

Thus, in comparison with the resources available from private sources, official sources of international liquidity are typically available for shorter periods, are subject to greater conditionality on use, and are limited in size. In general, the attraction of official sources of liquidity is that they carry somewhat lower interest costs and are not state contingent--that is, they are potentially available even when a country faces domestic or external difficulties.

b. The vulnerabilities of the system
and the potential role of the SDR

The combination of private and official sources of reserves and liquidity has created both strengths and vulnerabilities in the reserve system. While access to private financial markets has allowed many countries to manage their reserve positions efficiently and flexibly during normal periods, the growing dependence of the system on borrowed reserves has increased its vulnerability to financial market disturbances, especially those that occur on a global basis. In addition, this vulnerability has been increased by the shrinking size of official sources of financial resources relative not only to non-gold reserves but also to the scale of potential capital flows, at least as measured by the size of international financial markets. Moreover, some countries with only limited access to international financial markets face high implicit costs of adjusting domestic absorption in order to acquire reserves through current account improvements. For these countries, reserve accumulation has generally required compressing imports and restraining economic growth in excess of the amounts needed to service external debts. The necessity for a large number of countries to rely heavily on import compression to increase reserves can be seen as having impeded the expansion of world trade and as having made it more difficult to implement a growth-oriented strategy for dealing with the international debt problem.

In addressing the potential role of the SDR under current arrangements, it is relevant to note several points about its cost and availability. If a country holds its allocated SDRs as reserves, it incurs almost no net costs, 1/ since the interest payments it receives on its holdings of SDRs will just offset the charges it must pay on its allocated SDRs. If a country uses its SDRs, it incurs a cost equal to the SDR rate of charge, which reflects a weighted average of market interest rates on relatively riskless short-term securities denominated in the currencies that make up the SDR. Moreover, since the reconstitution requirement was abrogated in 1981, there have been no specific restrictions on the duration of the use of SDRs, and their availability is assured even when a country experiences adverse domestic or external developments.

In view of the SDR's cost and availability, it has been suggested that the efficiency and stability of the current international reserve

1/ Apart from assessments made under Article XX, Section 4.

system could be enhanced by increasing the supply of SDRs. The potential gains in efficiency--i.e., savings in costs--from meeting some portion of the need for additional reserves through SDR allocation would naturally vary by country, with those countries that have only limited access to financial markets experiencing the most significant gains. As a first approximation, these potential efficiency gains reflect the difference between the net costs of carrying reserves borrowed on private capital markets, which are positive for most countries, and the (almost) zero net cost of holding SDRs (which earn a rate of interest that matches the SDR rate of charge). It should be noted, however, that this measure of the efficiency gain must be adjusted to the extent that greater use of SDRs either leads to a higher cost of borrowed reserves for individual countries or involves a transfer of resources between groups of countries.

In addition to providing efficiency gains through lowering the net costs of carrying reserves, an increase in the supply of SDRs could enhance the stability of a reserve system heavily dependent on borrowed reserves, especially during periods of increased asset price variability. As noted earlier, the scale of resources that are potentially available from official sources under current arrangements has declined significantly relative to the volume of non-gold reserves. This has reduced the ability of such official arrangements to quickly offset any reduced availability of borrowed reserves associated with a major disturbance in financial markets.

The extent to which the official "safety net" underpinning the reserve system has become "frayed" depends not only on the scale of official resources that are available, but also on the vulnerability of the financial system to major disturbances. The integration of major financial markets--which has been facilitated by the removal of international capital controls, the liberalization of major domestic financial markets, and the globalization of trading in certain types of securities--has yielded important efficiency gains for the world economy. Nonetheless, these developments also have made it more difficult to limit the effects of a major financial market disturbance to a single market. The events of October 1987 have suggested that major financial market disturbances may involve a "flight to quality" that is reflected in increased interest rate differentials between corporate and government securities, as well as wider spreads between the rates charged to sovereign borrowers that market participants perceive to be of different degrees of creditworthiness. As a result, the cost and availability of borrowed reserves may become more differentiated among countries during a crisis period. It is therefore likely that those countries regarded as most creditworthy may obtain reserves at a lower cost than under normal conditions, whereas other countries may face higher borrowing costs and reduced availability of borrowed reserves.

The growing role of borrowed reserves, as well as the relatively slow expansion of the scale of potential liquidity available from official credit arrangements, have increased the importance of the emergency liquidity assistance that the central banks of countries with major

domestic and offshore financial markets can provide during major financial market disturbances. However, while such assistance can help preserve market liquidity, it does not necessarily prevent a sharp reduction in the availability of credit for countries whose creditworthiness is called into question. These considerations raise the issue of whether the official safety net underlying the reserve system should be strengthened, especially with regard to ensuring the existence of a "core" level of reserves whose short-term availability for many countries is independent of conditions prevailing in private markets.

Although such an expansion of the safety net could be achieved through a variety of measures, increased use of the SDR system could provide a natural vehicle for enhancing the safety net. As already noted, the availability of SDRs is not dependent on the state of private financial markets. Moreover, the short-term availability of the SDR is not now restricted by the need to undertake negotiations (in contrast with the GAB or Fund conditional credit) or by limited country coverage (in contrast with the Federal Reserve's swap lines or the facilities of the EMCF). This insured short-term availability is important since the timing and severity of financial market disturbances is difficult to predict.

It should be emphasized, however, that the ability of the SDR system to provide a safety net depends on the willingness of countries to hold allocated SDRs as part of their reserves. To this extent, if one of the primary objectives of SDR allocation was to strengthen the safety net, consideration should be given to measures designed to prevent or discourage prolonged net use of the allocated SDRs, even though such measures could reduce the attractiveness of the SDR relative to other reserve assets and thus run counter to other objectives.

Three means have been proposed for limiting the duration for which, or conditions in which, SDRs could be used under the Articles of Agreement. First, as discussed earlier, some allocated SDRs might be made available to certain groups of countries only in support of their adjustment efforts and subject to conditionality (i.e., "conditional" SDRs). A disadvantage of this approach, however, is that the negotiations involved in such arrangements could constrain the timely use of these SDRs during a crisis period, thus running counter to the objective of strengthening the safety net. A second approach would be to reinstitute some version of the reconstitution requirement. As yet a third approach, a "penalty" could be imposed on any extended use of the SDR, presumably in the form of a surcharge added to the SDR rate of charge assessed in cases of prolonged net use. 1/

1/ Such a penalty charge could not be imposed without amending the present provisions in the Fund's Articles of Agreement.

VI. Summary and Issues for Discussion

The first part of this paper addressed the concept, measurement, and distribution of international liquidity. The Executive Board has recognized in previous discussions of the SDR that the expanded capacity of national authorities to obtain reserves by borrowing from private sources in international capital markets has made the concept of a quantitative reserve shortage more difficult to define. Moreover, because international liquidity has become a much broader concept than international reserves, the overall amount of liquidity has become more relevant than the size of reserve holdings alone in the quantitative assessment of the need for reserve supplementation.

Both conceptual ambiguities and data limitations make it difficult to construct a meaningful quantitative measure of the amount of international liquidity that is available to any particular country or to countries in the aggregate. Accordingly, the paper contemplated several indirect quantitative approaches that might be pursued in attempting to assess the adequacy of international liquidity. Among these, an approach that appears to offer some promise is one where inferences are drawn from the patterns of adjustment in import volumes relative to both real GDP and export volumes. Directors may wish to comment on the attractiveness of this approach or may wish to suggest other quantitative procedures that they would consider more reliable for assessing the adequacy of international liquidity.

While quantitative approaches are important for assessing the adequacy of international liquidity and the "need" for reserve supplementation, the conceptual ambiguities and data limitations that such approaches confront make it desirable--many would say necessary--to rely as well on judgments about whether the functioning of the international monetary system and the performance of the world economy could be improved by expanding the role of the SDR. This approach to assessing the "need" for reserve supplementation was put forward during the formative stages of the SDR.

Contrary to the objective expressed in the Second Amendment to the Articles of Agreement, the SDR has not progressed toward becoming the principal reserve asset in the international monetary system. In response to concerns about this lack of progress, the second part of the paper addressed four broad approaches that might be considered for invigorating the role of the SDR in the near term or over the longer run. Directors may wish to indicate which of these approaches they could support, or which variants or different approaches they favor.

The first approach focused on ways to promote growth without discouraging adjustment. Some of the recent proposals along these lines have suggested that the SDR could play a greater role in the securitization and collateralization of claims on countries with debt-servicing difficulties, which might foster the restoration of voluntary private capital flows to these countries. Other proposals have suggested

different arrangements through which additional SDRs might be made available to developing countries, subject either to some form of conditionality or to a reconstitution requirement. These proposals include, in particular, but need not be limited to, mechanisms for post-allocation redistribution of SDRs.

A second approach to invigorating the SDR focused on ways to promote the use of SDRs by official or private entities. A major constraint on the usability and liquidity of the SDR under current arrangements is the fact that commercial banks and other private entities are not authorized to hold "official SDRs." The effects of this constraint could be offset considerably--and without authorizing private parties to hold "official SDRs"--by facilitating a significant expansion in the market for SDR-denominated instruments. One way of catalyzing such an expansion could concentrate on the establishment of some form of clearinghouse mechanism. An alternative option could involve the issuance of SDR certificates by an institution authorized to hold official SDRs, such as the BIS or the Fund itself. Either vehicle would be strengthened by, and also serve to facilitate, official exchange market intervention in SDR-denominated instruments.

Another suggestion would promote the use of SDRs by official entities through the introduction of a substitution account and/or an asset settlement mechanism based on the SDR. One issue that would arise in this context is the question of how the financial balance of a substitution account would be maintained. The other issue is whether the functioning of the international monetary system could be improved by such attempts to modify official reserve diversification practices and the payments settlement mechanism. An important question, in light of the large menu of market instruments that already exist for altering risk exposures, is whether a substitution mechanism or an asset settlement scheme could actually be effective in forcing countries with large payments imbalances to bear the exchange risk associated with their own policies, or would really be necessary to provide ample opportunities for other countries to reduce the exchange risk exposures associated with holding official reserve assets. Another fundamental question is whether substitution and/or asset settlement mechanisms would be useful in inducing countries to achieve the political will to impose discipline on themselves.

A third approach to invigorating the SDR focused on ways that the SDR might be used to provide an anchor against inflation. A central issue in this context is whether the global level of nominal demand could be made responsive to the supply of SDRs, which is not the case under current international monetary arrangements. The most ambitious variant of this approach would require reforming the system to one where the Fund was empowered to function as a world central bank and where the SDR provided the monetary base. A second variant might contemplate redesigning the system to integrate SDR allocation with the surveillance process by making access to allocated SDRs conditional on a Fund evaluation of appropriate policies.

The final approach to invigorating the SDR focused on ways to improve the efficiency and stability of the reserve system. An increase in the supply of SDRs could enhance the efficiency of the reserve system to the extent that the costs of earning or borrowing reserves exceed the SDR rate of charge. Under certain conditions, moreover, an increase in the supply of SDRs could provide a safety net for enhancing the stability of the system, which has become increasingly dependent on borrowed reserves and private sources of liquidity, as well as increasingly vulnerable both to financial market disturbances and to macroeconomic shocks that lead private creditors to abruptly revise their risk perceptions.

In this context, the ability of the SDR to provide an effective safety net depends on the willingness of countries to hold allocated SDRs as part of their reserves. Measures to make the SDR more liquid and usable, and therefore more attractive to hold, could be constructive. In addition, consideration might be given to measures that would make the use of the SDR analogous to the use of other official sources of liquidity, either through imposing some form of conditionality on the circumstances in which the SDR could be used or through introducing restrictions or financial penalties to limit the duration of its use.

A final issue that Directors may wish to address, particularly if there is divided support for different approaches to invigorating the SDR, is whether the potential usefulness of the SDR in the future might be taken into account in assessing the long-term global need for reserve supplementation. In this context, it might be attractive to consider a strategy of conducting regular allocations of SDRs at a moderate rate that prevents the share of SDRs in reserve holdings from eroding further, and that progressively brings it back to a level more compatible with the objective in our Articles of making the SDR the principal reserve asset in the system.