

The IMS
(International Monetary System ... or Scandal?)
and the EMS
(European Monetary System ... or Success?) *

Introduction

“Il n'est pire folie que vouloir être sage tout seul”.

La Rochefoucault

“Vingt fois sur le métier remettez votre ouvrage, polissez-le sans cesse et le repolissez”.

Boileau

The “IMS” acronym can only be interpreted today as meaning The International Monetary Scandal rather than the International Monetary System.

This article aims at making understandable, even to the – much sought-after by publishers – man in the street, the root causes of a few of the major policies and institutional arrangements underlying the actual disaster and gloomy future prospects confronting his daily life: awesome rates of unemployment reminiscent of the 1930s, unprecedented world inflation, wasteful and suicidal armament expenditure in even the poorest countries of the world, *etc.*

The first section offers an economic explanation that highlights a major blindness of virtually all analysts, responsible for the calamitous distortion of their policy advice.

* Revised (and updated) version of May 11, 1991 Jean Monnet Lecture at the European University Institute, Florence. I wish to express my deepest gratitude to Henny Ghesquière, a former student of mine at Yale University, now deputy director of the IMF Research Department, for many constructive suggestions.

The second – and probably most important – spells out political imperatives that inevitably dominate economic policy, and may reverse tomorrow the cold war policies of yesteryears.

The third and fourth revert, in this light, to the recent developments and future perspectives of the worldwide and regional components of the international monetary system.

I. Economic Analysis

A. The Explosion of International Reserves

Table 1, on the next page, summarizes with record brevity the functioning of the *International Monetary System*, or rather – to retain the same acronym – *Scandal* since the end of World War II: by decades from 1949 through 1979, and annually from 1986 through 1990.

The fantastic explosion of international reserve assets is analyzed into three components:

1. The residual impact of the traditional “Gold Standard”, *i.e.* the increase of gold holdings in volume, at \$35 per ounce;

2. The enormous growth of reserves attributable to the “Foreign Exchange Standard”, *i.e.* both the huge appreciation of gold at market prices (line IIA) due to the inability of reserve-debtor countries to preserve the gold convertibility, and the increasing portion of reserves held in their currency (lines IIB and IIC);

3. The minor amount of reserves held with the IMF in the form of SDR holdings (line IIIA) and of Reserve Positions in the Fund (line IIIB).

The indices on the following line show a *decoupling* of total reserves between 1969 and 1979, due to the *de facto* suspension of dollar convertibility as the rising dollar liabilities rose to a multiple of the dwindling gold hoard of Fort Knox, and its consequent “legalization” by President Nixon on August 15, 1971, forty years after a similarly unavoidable suspension of convertibility of the former major reserve currency, the pound sterling, on September 21, 1931.

TABLE 1

SOURCES OF INTERNATIONAL MONETARY RESERVES: 1949-1990

Year end	In billions of dollars										In % of total			
	1949	1959	1969	1979	1986	1987	1988	1989	1990	1949-1969	1969-1979	1979-1989	1986-1990	
I. Gold Standard	33.0	37.6	38.5	36.4	36.6	36.5	36.7	36.5	36.5	73	66	49	4	
II. Foreign Exchange Standard	10.6	16.3	33.7	776.8	781.3	1049.1	1017.6	1057.8	1167.7	23	28	43	88	
A. Gold Appreciation	-0.3	0.1	0.2	495.6	372.1	468.3	393.4	381.7	364.6	-1	-	-	42	
B. U.S. Dollars	3.2	10.1	18.0	210.5	298.9	425.4	424.1	430.3	467.6	7	18	23	34	
C. Other Currencies	77	6.1	15.5	70.8	110.3	175.4	200.1	245.8	335.5	17	11	20	12	
III. International Monetary Fund	1.7	3.3	6.7	31.9	67.1	73.3	65.2	60.4	62.7	4	6	8	8	
A. SDR Holdings	x	x	x	16.4	23.8	28.7	27.1	26.9	29.0	x	x	x	3	
B. Reserve Positions	1.7	3.3	6.7	15.5	43.2	44.6	38.0	33.5	33.8	4	6	8	5	
IV. Total	45.2	57.2	79.0	845.1	884.9	1179.0	1119.4	1154.6	1266.9	100	100	100	100	
Index: 1949 = 100	100	127	115	1810	1958	2608	2477	2554	2803					
1969 = 100			100	1010	1120	1492	1417	1462	1604					
1979 = 100				100	105	140	132	137	150					
1986 = 100					100	133	127	130	143					
Period Changes	1949-1969	1969-1979	1979-1989	1990										
I. Gold Standard	5.5	-2.1	0.1	-										
II. Foreign Exchange Standard	23.1	743.1	281.0	109.9										
A. Gold Appreciation	0.5	495.3	-113.8	-17.1										
B. U.S. Dollars	14.8	192.5	219.8	37.3										
C. Other Currencies	7.8	55.3	175.0	89.7										
III. International Monetary Fund	5.0	25.2	28.5	2.3										
A. SDR Holdings	x	16.4	10.5	2.1										
B. Reserve Position	5.0	8.8	18.0	0.3										
IV. Total	33.8	766.1	309.5	112.3	100	100	100	100	100	100	100	100	100	

Reserve increases have been extremely moderate ever since, except for a 33% increase in 1987 and a 10% increase in 1990.

The right side of the top portion of the table shows that the main explanation of the contrast between the years 1949-1969 and 1979-1990 is the replacement of the *Gold Standard* by the *Foreign Exchange Standard*, the share of the latter in total reserves rising from 23% in 1949 to more than 90%, while that of gold, measured in volume at \$35 per ounce, dropped to 3%, the share of IMF SDR holdings and reserve positions remaining relatively insignificant throughout.

The *period changes* recorded in the bottom half of the table are more significant. They show that the Foreign Exchange Standard contributed already more than two thirds of reserve increases over the years 1949-1969 and well over 90% afterwards, while the share of gold dropped from 16% to nil, and that of the IMF from 15% to only 2% in 1990. This 2% reflected merely an increase due entirely to the depreciation of the dollar, the volume of SDRs, which officials presumed would become the primary component of world reserves, having in fact remained unchanged since 1981!

B. *The Regional Distribution of International Reserves*

1. As far as "Credit Reserves" are concerned, the recorded results of the system are at the opposite pole from common sense and from the goals often reiterated in pious resolutions of the United Nations Assembly:

a) The Third World finances the industrial countries, at a level reaching \$144 billion at the end of the 1970s and rising to \$270 billion at the end of 1990 (see bottom of Appendix Table I).

b) The poorest countries, *i.e.* the non oil-exporting countries of the Third World, are by far the major creditors.

c) The basic source of this insane lending pattern is the role of foreign exchange reserves (see Table IA) while, on the contrary, SDR and IMF credit claims, the other insignificant items, conform to the common sense prescription of the United Nations requiring the richest countries to lend to the poorest (see Table IB).

d) This pattern of net foreign exchange reserves is, of course, to be expected under the Foreign Exchange Standard: so-

called "reserve currency countries" – especially the United States – have no need to accumulate reserves as long as they can settle their deficits with their own IOUs; the other countries have plenty of reasons to accumulate a large portion of their global reserves in interest-earning foreign exchange, rather than in sterile – even costly – gold hoards. However, it is also nonviable in the long run, not only because the growing indebtedness of reserve-center countries is bound, at some point, to instill bearish expectations about their currency and deter further purchases, but also because the "beneficiary" (?) countries cannot stand forever the handicap of increasing uncompetitiveness of their overvalued currency in world trade.

2. As far as "Gold Reserves" (Appendix Table II) are concerned, the richer countries of the industrial world were, of course, the main reapers of the bookkeeping profits resulting from the huge increase of market gold prices and peaking at \$496 billion at the end of the 1970s, but dropping to \$365 billion in 1990.

The share of the United States in these profits was far smaller than that of the other industrial countries whose gold holdings are now 2.5 times those of the United States, having more than quadrupled in volume from 1949 (\$5 billion) to 1990 (\$22 billion), while those of the United States dropped from \$24 billion to \$9 billion.

C. *The Link between the Mechanism and the Results*

These observations bring us back to the core of the problem: the logical absurdity and disastrous results of the use of a few national currencies as the major, or sole, instrument of international monetary reserves.

The first shortcoming of this system is the basic asymmetry it creates in the settlement of balance-of-payments disequilibria. These normally redistribute unchanged international reserves between surplus and deficit countries, gradually imposing readjustment policies upon the latter as their reserves decline to unacceptably low levels. Contrariwise, the deficits of a reserve-centre country may be financed mostly – or even overfinanced – by an increase of world foreign exchange reserves, with little or no decline of gross reserves

for that reserve-centre country and, therefore, no imperative pressure for the readjustment of inflationary policies.

The second shortcoming is that this process may easily degenerate into a self-feeding spiral of inflationary reserve increases, since these are reinvested in the reserve centres and increase the ability of their leaders – official and private – to pursue inflationary policies for any purposes they may wish, even if often totally repulsive to the ultimate, unwitting, lenders.

The incomprehensible lack of awareness of this defect by virtually all economic analysts distorts calamitously their policy advice.

The third shortcoming is the stimulation of lending by poorer and less adequately capitalized countries to richer countries, far less dependent on foreign capital for their economic development.

D. *The "Exchange Standard" Historical Debate*

The major political significance of the Gold Exchange Standard of former times as well as of the Paper Exchange Standard of today was clearly perceived nearly 200 years ago by Immanuel Kant in the fourth article of his "Perpetual Peace: A Philosophical Essay" (1795):

"No National Debts Shall Be Raised by a State to Finance Its Foreign Affairs".

No objection can be taken to seeking assistance, either within or without the State, in behalf of the economic administration of the country; such as, for the improvement of highways or in support of new colonies or in the establishment of resources against dearth and famine. A loan, whether raised externally or internally, as a source of aid in such cases, is above suspicion. But a credit system, when used by the powers as a hostile, antagonistic instrument against each other and when the debts under it go on increasing indefinitely and yet are always liquid for the present (because all the creditors are not expected to cash their claims at once), is a dangerous money power. This arrangement – the ingenious invention of a commercial people in this country [England] constitutes, in fact, a treasure for the carrying on of war; it may exceed the treasures of all the other States taken together, and it can only be exhausted by the forth coming deficit of the exchequer, – which, however, may be long

delayed by the animation of the national commerce and its expansionist impact upon production and profits. The facility given by this system for engaging in war, combined with the inclination of rulers toward it (an inclination which seems to be implanted in human nature), is therefore a great obstacle in the way of a perpetual peace. The prohibition of it must be laid down as a preliminary article in the conditions of such a peace, even more strongly on the further ground that the national bankruptcy, which it inevitably brings at last, would necessarily involve in the disaster many other States without any fault of their own; and this would damage unjustly these other States. Consequently, the other States are justified in allying themselves against such a State and its pretensions.

The Sterling Exchange Standard continued nevertheless to grow in the 19th century with the expansion of the British empire, throughout which the national currencies of dominions and colonies were uniformly backed by – and issued against – equivalent claims on the Bank of England.

The extension of this practice to independent foreign countries was cleverly argued by UK participants at the international monetary conferences held in Brussels, Geneva, *etc.* to tackle the shortage of gold – at its former prices in national currencies – as legal reserve requirement for national money supplies vastly increased by wartime inflation and postwar reconstruction. It was never legally agreed at these conferences, whose concluding remarks had to record the dire warnings issued by various delegates, particularly the Belgian Prime Minister and Minister of Finance, Léon Delacroix, who argued forcefully for an alternative solution, more necessary today than ever, to end the scandalous abuses of any unbridled Exchange Standard: the creation of an "International Institute of Issue and Control" which "would operate, in the first place, as a vast clearing-house of exchange. It would make all possible use of compensation and would superintend the settlement of all transactions ... In so far as compensation would be impossible and especially for the purpose of settling temporary differences ... the Institute will permit the liquidation of transactions by the issue of 'gold bonds'" (anticipating by more than a quarter of a century Keynes' proposed "bancors").

In the failure of agreement on Delacroix's proposals, the Gold Exchange Standard grew considerably throughout the 1920s. The Gold Commission of the League of Nations was still debating its defects and vulnerability when events confirmed the fears of the critics. The gold-

convertibility of the pound sterling had to be suspended on September 21, 1931, its foreign indebtedness having grown far beyond its dwindling gold reserves. The huge exchange losses incurred as a result by various foreign central banks exceeded, of course, the interest-earnings that had led them to accumulate sterling assets as reserves, and they all returned for a while to a strict Gold Bullion Standard, obviously too deflationary to be tenable in the long run, and replaced in fact, following World War II, by a Dollar Standard whose functioning and results have been analyzed above (Section I).

Jacques Rueff, Fritz Machlup and I were the most profligate critics of the system, fundamentally in agreement about its defects, but with basic differences of emphasis and in proposals for reform.

Rueff and I were primarily concerned with the disastrous shortcomings of the huge foreign exchange component of international monetary reserves, while Machlup earmarked most of his sarcasm for the logical absurdity of its small gold component.

Rueff, however, argued for a pure "gold standard" from which all fiduciary reserves would be eliminated and replaced, to avoid an unbearable, deflationary reserve shortage, by a once-and-for-all increase in the price of gold. I vainly tried to convince him that this solution was a will-o'-the-wisp, since you could not erase from the memory of our policy-makers the knowledge that they could impose on the public the absorption of enormous amounts of paper money, far beyond what they would have dreamed possible in the days of the gold standard. Even if a particular government might be willing to give up such a convenient policy tool, none could commit its successors to renounce it for ever.

Machlup and I were in complete agreement about the ideal system:

1. The adoption of a single reserve instrument, in the form of truly international reserve deposits with the International Monetary Fund.

2. The adjustment of reserve creation to the requirements of optimal, feasible growth rate, *i.e.* in a presumed range of 3-5%, through a similar rate of growth of the IMF net loans and investments portfolios.

3. The earmarking of these loans and investments for agreed high priority objectives, among which the financing of development in the less capitalized countries, but also others, such as the fight against pollution, contagious diseases, *etc.* (Such objectives should be contrasted with those that have dominated the Exchange Standard: the financing of the Vietnam war and the explosion of military expenditure.)

E. *The Richest Country in the World becomes its Major Borrower*

Most of this analysis and of these conclusions are identical to those on which an intellectual – if not political – consensus was reached in June 1974 by Jeremy Morse's Committee of Twenty, after ten years of continuous debates and negotiation between finance ministers, governors of central banks and their experts.

About sixteen years went by, however, without any agreement on a reform deemed as urgent as essential for the restoration of an orderly monetary system. Why?

One of the main obstacles was obviously the reluctance of short-sighted US politicians to abandon the "extravagant privilege" denounced by President De Gaulle: the possibility of financing most of the US deficits through the acceptance of the national US currency as an international settlements medium by foreign central banks, commercial banks and other large international investors. This, however, had to be expected: it reduced the US need for unpopular tax increases or reductions in expenditure, even if contrary to the longer-run national interest.

I would put the major blame, therefore, on the other countries for being persistently willing to extend such financing to the US, in increasingly huge amounts, at the cost of a world inflation without precedent. How can this be explained?

First of all, by bureaucratic routine, the negotiating difficulties of agreeing on an alternative world currency to be created *ex nihilo*, and the reluctance of foreign firms in competition with US firms at home or abroad to abandon the advantage derived by them from the resulting overvaluation of the dollar.

Secondly, because the disadvantages of such financing are mainly confined to a few countries with huge surpluses, primarily Japan and Germany.

TABLE 3

UNITED STATES: INTERNATIONAL BALANCE SHEET, 1949-1990
(\$ billion)

Year and	1949	1959	1969	1979	1986	1987	1988	1989	1990
I. NET CAPITAL	-	-0.9	+11.7	+100.6	-462.7	-554.5	-693.3	-846.3	-886.1
A. Official Reserves	-1.7	-8.6	-13.7	-152.1	-203.8	-248.3	-285.1	-279.7	-297.4
1. Foreign Exchange	-3.2	-10.1	-15.0	-156.0	-223.9	-269.9	-304.5	-292.7	-317.4
2. with IMF	+1.5	+1.5	+1.3	+4.0	+20.1	+21.6	+19.4	+19.0	+20.1
- SDRs	x	x	x	+2.7	+8.4	+10.3	+9.6	+10.0	+11.0
- other	+1.5	+1.5	+1.3	+1.3	+11.7	+11.3	+9.7	+9.0	+9.1
B. Private	+1.7	+7.7	+25.4	+252.7	-258.9	-306.2	-408.7	-572.6	-588.7
1. Banks & Treasury	-2.3	-5.2	-17.0	+32.5	-40.4	-73.9	-106.6	-149.9	-167.1
a. Banks	-1.7	-3.6	-16.0	+46.7	+55.7	+8.7	-5.7	-15.4	-32.8
b. Treasury Securities	-0.6	-1.6	-1.0	-14.2	-96.1	-82.6	-100.9	-134.5	-134.4
2. Customers	+4.0	+12.9	+42.4	+220.2	-218.6	-232.3	-302.1	-422.7	-421.6
ASSETS	18.4	46.8	114.3	589.1	1127.0	1247.2	1340.7	1483.2	1380.4
A. Official Reserves	1.5	2.0	5.1	7.8	37.4	34.8	36.7	63.6	72.3
1. Foreign Exchange	-	-	2.8	3.8	17.3	13.1	17.4	44.6	52.2
2. with IMF	1.5	2.0	2.3	4.0	20.1	21.6	19.4	19.0	20.1
a. SDR Holdings	x	x	x	2.7	8.4	10.3	9.6	10.0	11.0
b. Reserve Position	1.5	2.0	2.3	1.3	11.7	11.3	9.7	9.0	9.1
B. Private	16.9	44.8	109.2	581.3	1089.6	1212.4	1303.9	1419.6	1308.2
1. Banks	1.3	3.6	12.9	157.0	507.3	549.5	608.0	661.7	654.3
2. Customers	15.6	41.2	96.3	424.3	582.2	663.0	695.9	757.9	653.9
II. LIABILITIES	-18.4	-47.7	-102.7	-488.5	-1389.7	-1801.6	-2034.5	-2329.5	-2466.5
A. Official Reserves	-3.2	-10.6	-18.8	-159.9	-241.2	-283.0	-321.9	-337.3	-369.6
1. Foreign Official Assets	-3.2	-10.1	-17.8	-159.9	-241.2	-283.0	-321.9	-337.3	-369.6
2. to IMF	-	-0.5	-1.0	-	-	-	-	-	-
a. SDR Allocations	x	x	x	(-4.2)	(-6.0)	(7.0)	(-6.6)	(-6.4)	(-7.0)
b. Gold Deposits and Investments	-	-0.5	-1.0	-	-	-	-	-	-
B. Private	-15.2	-37.1	-83.9	-328.6	-1348.5	-1518.9	-1712.7	-1992.2	-2094.9
1. Banks & Treasury	-3.6	-8.8	-29.9	-124.5	-547.7	-623.3	-714.6	-811.6	-821.4
a. Banks	-3.0	-7.2	-28.9	-110.3	-451.6	-540.7	-613.7	-677.1	-687.0
b. Treasury Securities	-0.6	-1.6	-1.0	-14.2	-96.1	-82.6	-100.9	-134.5	-134.4
2. Customers	-11.6	-28.3	-54.0	-204.1	-800.8	-895.3	-998.0	-1180.6	-1275.5
a. discrepancy	-5.2	-8.6	-3.8	-39.5	-196.5	-203.3	-194.9	-217.5	-290.3
b. reported	-6.4	-19.7	-50.2	-164.6	-604.3	-692.0	-803.2	-963.3	-985.2
III. FOREIGN AID	11.0	15.9	30.0	57.4	89.6	88.6	85.6	84.2	84.2
III. GOLD	24.4	19.5	11.9	135.5	102.4	127.6	107.4	105.2	102.4
IV. TOTAL	35.4	34.5	53.6	293.6	-270.6	-338.2	-500.3	-656.9	-702.4
Total reported in Survey of Current Business	40.8	43.1	56.6	333.0	-74.1	-135.0	-306.0	-439.7	-412.2
Conditions:	-5.2	-8.6	-3.1	-39.5	-196.5	-203.3	-194.3	-217.3	-290.3
Discrepancy	-0.2	-	+0.1	x	x	x	x	x	x
Gold premiums									

¹ Liabilities do not include "contingent" liabilities for SDR Allocation shown within parentheses.
Sources: 1949-1969: *Historical Statistical of the United States, Colonial Times to 1976*, Washington D.C., 1975, pp. 866-869.
1979-1990: *Survey of Current Business*, June 1991, vol. 71, no. 6, p. 26.

surpluses in such a way as to finance the disproportionate contribution of the US to the world defense expenditure jointly regarded by all of them as essential to face the threat of Soviet aggression or blackmail.

They could hardly, however, convince their parliaments and public opinion to increase domestic taxation – or reduce expenditure – in order to subsidize the enormous budgetary deficits of the richest country in the world. It was much easier, politically, to ask their central banks to absorb the dollar overflows in the private market, and thereby to encourage their commercial banks and other large investors to invest also in the United States. This would preserve, or even increase, the exchange rate overvaluation of the dollar and its uncompetitiveness *vis-à-vis* foreign countries' exporters and importers in world markets.

This is undoubtedly the main explanation of foreign acceptance of huge and persistent accumulation of paper dollar claims, as long as the US favored such discrimination against itself in world markets, including the US domestic market, in order to prevent a fall of the dollar exchange rates. At some point, however, US trade lobbies would rebel against this unfair handicap and force the Administration to readjust the overvalued dollar rates. This could always be achieved easily by official declarations "talking down" the dollar, supplemented if necessary by official market sales of paper dollars whose issue could be increased at will by the US authorities.

This explains the fantastic fluctuations of US exchange rates, totally unrelated – or even opposed – to the evolution of the balance of payments on current account. The dollar rate *vis-à-vis* the main rival currency, the Deutsche Mark, thus moved from DM 2.82/\$ in March 1973 to 1.71 in January 1980, 3.47 in February 1985, and a record low of less than 1.50 at the end of 1990.

II. Political Imperatives

A. *The Cold War Era*

The enormity of world military expenditure, guesstimated today at about \$1,000 billion per year – of which more than \$300 billion for the United States alone – is undoubtedly the major source of the unprecedented economic, financial and monetary disequilibria con-

fronting us today in our daily life. They reflect, of course, all too understandable and legitimate concerns for national security, highlighted in the old slogan: *Si vis pacem, para bellum!*²

Public opinion was thereby led to accept an over-rearmament race under which the United States sought its security, and that of its allies, through the military superiority of NATO over the Warsaw Pact, and the USSR sought its own security, and that of its allies, through the military superiority of the Warsaw Pact over NATO. Needless to say, they could not both succeed simultaneously, and therefore the race continued uselessly with two consequences:

- Worldwide inflation, since military expenditure increases spendable income without any parallel increase of available goods and services on which it can be spent, nor of the real wealth from which taxes can be levied.
- The growing threat of "preventive" aggression by the power deeming itself in danger of losing the race, or of miscalculation by either superpower of the other's intentions, such as – reportedly – the radar misreading of a flight of birds, *etc.* This diminished, rather than strengthened, the security of both superpowers and their allies.

Drastic cuts in military expenditure should, at long last, prove feasible in the disarmament negotiations between the two superpowers. However, these are likely to tarry, or even fail, if they are left in the hands of military negotiators.³ The switch from an inflationary and lethal over-rearmament race to a mutual race toward disarmament should be initiated, even unilaterally at the start, by either of the major protagonists without endangering in any way its own security. A Massachusetts Institute of Technology committee report to President Reagan concluded in June 1987, that "the superpowers could achieve their goal of deterring attacks with drastically fewer nuclear arms ... since a limited attack on the United States, involving only one percent of the Soviet strategic nuclear arsenal, could set off a collapse of the US economy that would last decades ... The Soviet Union is even more vulnerable".⁴

This would mean that either of them could slash its present nuclear arsenal even by as much as 99% – let us say 50-90% – and hope that the other would follow suit.

² "If you wish peace, prepare for war!"

³ As convincingly argued by ALVA MYRDAL in numerous publications.

⁴ *The International Herald Tribune*, June 22, 1987.

B. *Pax Russo-Americana?*

The Gorbachev Revolution should, at long last, usher in a new era of peace and cooperation, eliminating hundreds of billions of dollars per year of military waste, and permitting both:

- the reduction of global expenditure to a non-inflationary level; and

- an enormous increase in the financing of productive investments, particularly for the less capitalized countries of the Third World.

The implications of this revolution for international monetary reform were spelled out constructively and concretely in the unprecedented and revolutionary statement of the delegate from the USSR Institute of World Economics, Dr. D.V. Smyslov, at the Round Table East-West Conference on The Future of the Global Economic and Monetary System, held at Szirak (Hungary) on August 28-29, 1988.⁵

In brief, Dr. Smyslov's paper repudiated the former USSR call for a return to gold, and asserted that the policy of the new Administration was to seek full participation in worldwide monetary, financial and economic groupings and institutions, such as the International Monetary Fund, the World Bank, GATT, *etc.* This, however, should entail the fundamental reforms of the international monetary system, long advocated by me, particularly the replacement of the dollar by a truly international monetary unit.

Moreover, the Soviet Union was also ready to use the ECU as an alternative to the SDR, especially if the United States' opposition continued to delay the worldwide reforms deemed necessary by most other countries, and particularly by the European Community.

These proposals have since been encapsulated in President Gorbachev's call for a common "European House", encompassing the United States as a stabilizing element,⁶ and expanding the European Community, as foreseen by President De Gaulle, from the Atlantic to the Urals.

President Delors has suggested instead the name of "European Village" for the forthcoming association of a "USSR House" and a

⁵ Edited by M. SZABO-PELSÖCZI, with foreword by ROBERT TRIFFIN, Institute for World Economics of the Hungarian Academy of Sciences, Budapest, 1990.

⁶ For example, assuaging European fears of the predominant might of newly-reunited Germany.

"European Community House" that would obviously include the former satellites of the defunct Warsaw Pact.⁷

III. The Internationalization of the Exchange Standard

I have indefatigably and endlessly reiterated for more than thirty years the obvious rudiments of a rational world monetary system, substantially endorsed in the swan song of Jeremy Morse's Committee of Twenty, after ten years of debates and negotiations between ministers of finance, governors of central banks and their economic advisers.⁸

International monetary reserves should be held exclusively - except possibly for modest and strictly limited amounts of working funds - in the form of International Reserve Deposits (IRD) with the IMF, rather than in gold, national reserve currencies, Special Drawing Rights and Reserve Positions with the Fund, as is the case today.

IRD transfers would therefore become the only way for central banks to settle overall balance-of-payments surpluses or deficits on current and capital accounts; the IMF would become a clearing house, through which bilateral surpluses and deficits could cancel each other, leaving only a much smaller multilateral net surplus or deficit to be financed through a gain or loss of IRD reserves.

Clearing houses were the ancestors from which central banks developed gradually and naturally in the nineteenth century. Could one therefore expect a similar evolution of the IMF from a world clearing house into a world central bank?

Yes, as far as credits are concerned, including the famous "lending of last resort" which is one of the main functions of central banks. The universal acceptance of IRDs would enable the IMF to extend unlimited credits to its members. I have suggested that it would be necessary, therefore, to reassure prospective surplus (creditor) countries about inflationary IMF policies by inserting in its statutes a

⁷ See the Statement on the broad lines of Commission policy of President DELORS to the European Parliament at Strasbourg on 17 and 18 January 1989, p. 18.

⁸ See *International Monetary Reform*, Documents of the Committee of Twenty, International Monetary Fund, 1974.

presumptive limitation to a growth rate of, let us say, 3-5% yearly, the Fund's ability to increase world reserves through the expansion of its loans and investments portfolio.

Overenthusiastic followers, however, as well as dire critics of what they regarded as my naive utopianism, misinterpreted this proposed clearing house as a world central bank. I had to disabuse them repeatedly in this respect by pointing out that I regarded it as wildly premature to imagine that it could play on a world scale the third and essential function of a full-fledged central bank, *i.e.* to create a world currency, or even to guarantee the enduring stability of exchange rates between the national currencies of all member countries.⁹

The 3-5% figure mentioned above should normally prevent the wild inflationary and deflationary disorders typical of – and flowing from – the old gold exchange as well as the present paper exchange standard. It could, however, be set aside by special majority vote under exceptional circumstances, such as the two explosions of oil prices in 1973 and 1979.

The worldwide monetary reforms outlined would serve the national long-term interests of the United States, as well as of the rest of the world, but are adamantly resisted (*a*) by powerful politicians benefiting from the “extravagant privilege” denounced by President De Gaulle and enabling them to elude unpopular tax increases or reductions of expenditures, and (*b*) by private interest groups profiting from the hegemony of the dollar in the investment of foreign exchange reserves and other working funds.

The resumption of the aborted negotiations concerning the fundamental international monetary reforms deemed essential and urgent by the Committee of Twenty, sixteen years ago, continues repeatedly to be shelved by the summit meetings of the major financial powers. Attention is instead centered on the discussion of exchange rates, the United States expecting other countries to defend the rate of the dollar whenever it wishes to prevent its depreciation, but without foregoing the possibility of “talking” or forcing it down whenever it deems it preferable, in order to reduce its foreign deficits

⁹ See, for instance, my answer to Senator PAUL H. DOUGLAS, Chairman of the Joint Economic Committee, in Macmillan booklet *Hearings, Joint Economic Committee of the 87th Congress on the International Monetary Position and Policy of the United States* (Washington, October 28, 1959) and my article “A Tardy Autopsy of the Keynes Plan for an International Clearing Union: its Merits and Drawbacks” in ALAIN BARRÈRE, ed., *Keynesian Economic Policies*, Macmillan, 1990.

and fight otherwise insuperable protectionist lobbying pressures by firms and trade unions threatened by bankruptcy and unemployment.¹⁰

Other countries should obviously do whatever they can to stimulate and facilitate the participation of the United States in the restoration of a worldwide monetary order by using – as suggested by an old American slogan – both “the carrot and the stick”:

– the “carrot” by couching their own reforms and policies so as to contribute to the solution of the US dollar problem as well as to minimize, as far as possible, their present overdependence on the vagaries of the dollar;

– the “stick” by denying the US the “extravagant privilege” of financing the perpetuation of US policies prejudicial to all concerned.

The countries of the European Community are best able to take the leadership in such regional agreements, as outlined below.

IV. Regional Monetary Cooperation

A. *Its Usefulness as a Complement to Worldwide Cooperation*

Regional monetary cooperation should not be viewed simply as a temporary second-best to worldwide cooperation, pending full US participation in the latter. It should also *permanently* supplement worldwide cooperation by exploiting as fully as possible other opportunities for fuller mutual cooperation and commitments negotiable only among closely interdependent countries, united by common traditions or forced by history to accept the hegemony of a powerful neighbour.

The present oligocentric world political, military, economic, financial and monetary system is obviously far from ideal in this respect. It should be reformed, but will never entirely disappear. In the

¹⁰ See, for instance, the March 24, 1987 speech of M. ROBERT HELLER, Governor of the Federal Reserve Board, pointing out that “entire industries have disappeared in the United States during the period of the dollar rise, while new ones were created in the countries whose currency depreciated”. The rise of the previously inexistent Japanese car industry is a case in point.

monetary field, as in others, all powers should not be concentrated at the top, but distributed between the center and various groups and subgroups, as they are indeed, even in relatively homogeneous countries, between provinces, cantons, shires, departments, municipalities, etc.

As for the IMF, it should reserve its limited time and competence to deal with problems insoluble at a lower level, for instance leaving the EMF to deal with payments problems between France and Germany, the CMEA to deal with those between Hungary and Rumania, and other similar continental, and particularly sub-continental groups in Asia, Africa and the Pacific, to deal with those among their members.

Such a decentralization of the defunct Bretton Woods system would help rally to it many disaffected countries of the Third World as well as non-member countries of the Communist World.

B. *The European Community*

1. The First Twenty Years (1958-1978): Paralysis of the European Drive

Paradoxically, the first twenty years of the European Community were marked by an enormous regression of European monetary cooperation. The United Kingdom argued that the very success of the European Payments Union (EPU) should spell its termination in favor of a worldwide restoration of convertibility based, as before, primarily on the pound and the dollar as the main instruments of international settlements and reserve accumulation, and therefore eliminating the EPU unit-of-account as a rival of sterling.

The EPU was replaced by the European Monetary Agreement (EMA) under which most clearing transactions were returned to the private market, and credit provisions no longer included partial automatic financing of intra-European balance-of-payments deficits by the countries in surplus. Official cooperation centered mostly on international consultation and cooperation of central banks through the IMF, the Group of Ten and the Bank for International Settlements (BIS) and mutual swap agreements with the Federal Reserve System.¹¹

¹¹ See the admirable booklet of J.P. ABRAHAMS and C. LEMINEUR-TOUWSEN on "The European Monetary Choices, 1950-1980", reproducing their April 1981 article in *Cahiers de la Faculté des Sciences Economiques et Sociales de Namur*.

A momentous new step toward European monetary union was expected from the first summit meeting of heads of state or government at The Hague, in December 1969. Jean Monnet, the Father of Europe, had convinced Willy Brandt to call such a meeting to create a European Reserve Fund, with which central banks would be required to hold an agreed portion of their international monetary reserves: 20% initially, rising gradually to 100% at the final stage of full monetary union.¹²

This simple, concrete and immediately practical proposal was, unfortunately, "kicked upstairs" into a more ambitious proposal for full "monetary union" subject, however, to preliminary, transitory provisions extending over ten years, and spelled out in the 1970 Werner Plan: the gradual elimination of exchange margins and *de facto* stabilization of exchange rates.

Twenty years have elapsed without full implementation of these provisions.

2. The Resumption of Negotiations: Copenhagen, 1978

The resumption of the drive toward European monetary unity can be dated from the 1978 IMF meeting at Copenhagen. It should be credited primarily to three statesmen and their experts: Roy Jenkins (assisted by Michael Emerson) from the European Community, Helmut Schmidt (and Horst Schulmann) from Germany and Valéry Giscard d'Estaing (and Bernard Clappier) from France.¹³ Their intellectual agreement led with amazing rapidity to the adoption of the European Monetary System (EMS) in March 1979.

¹² I helped JEAN MONNET prepare the necessary documentation for Chancellor BRANDT which neither the Bundesbank nor the Ministry of Finance were willing to provide. See my "Note sur ma collaboration avec Jean Monnet" in *Témoignages à la mémoire de Jean Monnet*, Fondation Jean Monnet pour l'Europe, 9 November 1989, pp. 529-534, particularly p. 532.

¹³ The former Chairman of the IMF, JEAN-PAUL SCHWEITZER should also be mentioned for his courageous denunciation, at the 1970 IMF meeting, of the inflationary excesses of paper dollar accumulation by central banks, his daring assertion of "the need for the United States to settle its balance of payments with primary reserve assets ... [and] to make a contribution toward a general realignment of currencies ... suggesting [in effect] that the dollar be devalued" (MARGARIET DE VRIES, *The International Monetary Fund 1972-1978*, Volume II, p. 1003).

3. The European Monetary System: 1979-1990

The EMS has two basic objectives:

- as long as different rates of national inflation cannot be substantially avoided, to stabilize real exchange rates between participating currencies through appropriate realignments of their nominal rates; and

- to reduce as sharply as possible these national inflation rates, thus also making it possible to preserve the stability of nominal exchange rates.

An indication of successful performance is that realignments between the participating currencies have always been agreed promptly during brief weekend meetings and have become much sparser in number and importance.

For the seven major fully-participating countries that form the core of the system, the average rates of inflation - measured by cost-of-living indices - were high and very disparate in the first four years (March 1979 - March 1983), but were slashed in the last seven years (March 1983 - March 1990) to a range of about one fifth for the Netherlands to less than one third for Italy. Consequently, the realignment of nominal exchange rates *vis-à-vis* the ECU also dropped to a yearly average of plus 1.19% for Germany and the Netherlands to minus 1.12% for Italy, compared to plus 3.34% for Germany to minus 4.3% for Italy (see Table 4).

This progress toward price and exchange rate stability contrasts sharply with the smaller progress of the United Kingdom and the United States in this respect, but especially with the switch from appreciation to depreciation for the exchange rate of the pound sterling and particularly the dollar.

It is unanimously agreed today that the EMS has succeeded, far beyond the hopes of even its most fervent advocates, in performing the essential function of any exchange-rate system, *i.e.* to stabilize real exchange rates within the European Community at competitive levels consonant with desirable capital movements from its more developed to its less developed participating countries.

This should assuage the initial fears which prompted the national central banks of most of the Community countries - particularly the Bundesbank - to oppose faster progress toward European Monetary Union because this might force the surplus countries to

extend inflationary financing to partner countries unable to avoid excessive or persistent balance-of-payments deficits.

These fears have proved totally unfounded, enabling me to spare the reader a description of the complicated provisions of EMS for mutual financing designed to avoid, minimize or postpone exchange-rate realignments. "Medium-term financial assistance" and "short-term monetary support" were never used at all. Only "very short-term monetary support" was resorted to occasionally, for relatively insignificant amounts - rarely totalling more than two billion ECUs - and promptly repaid each time.

This is due, however, to the fact that countries resorted rarely to the treaty provisions for compulsory financing of so-called "marginal" interventions whenever their exchange-rates reached 2.25% above or below their agreed bilateral central rate *vis-à-vis* any other member currency, except the Italian lira, whose margin was provisionally enlarged to 6%, and the pound sterling which entered the system only in November 1990.

Most interventions were "intra-marginal" and financed, as previously, in dollars, rather than in ECUs or member currencies.

C. Future Perspectives

The repeatedly reaffirmed objective of full economic and monetary union is inseparable from political union, and therefore raises crucially difficult problems of implementation, geographic scope and relationships with other parts of the world.

1. Cooperation in the Solution of the International Dollar Crisis

What is most certain in this regard is that this should and would eliminate the hegemony of the US paper dollar in future European settlements and reserve accumulation, which should instead take place in ECUs or IRDs.

This would aggravate enormously the international crisis of the dollar if the Community did not insert its own policies and institutional development within the world framework, as stressed in the preceding section of this paper. The fulfillment of its economic and monetary union should therefore be seen as a way to cooperate far

TABLE 4

PROGRESS TOWARD EUROPEAN MONETARY UNITY: 1979-1990
(% changes)

	Realignment of Nominal Exchange Rates ¹			Cost of Living Increases		
	Total		Yearly Average	Total		Yearly Average
	1979-83	1983-90	1979-83	1979-83	1983-90	1979-83
Germany	+13.34	+8.32	+3.34	21.94	11.19	5.49
Netherlands	+9.01	+8.30	+2.25	23.79	8.03	5.95
Belgium	-11.06	+4.85	-2.77	34.48	22.30	8.62
Luxembourg	-11.06	+4.85	-2.77	36.49	18.37	9.12
Denmark	-11.91	+3.05	-2.98	47.86	33.71	11.97
France	-14.64	0.01	-3.66	57.42	30.08	14.36
Italy	-17.21	-7.84	-4.30	90.55	59.01	22.64
Ireland	-7.59	-6.45	-1.90	84.39	146.00	21.10
Greece	-21.96	-60.33	-5.49	126.20	193.19	31.55
Portugal ²	-27.89	-59.62	-6.97	115.23	154.46	28.81
Spain ²	-23.84	-6.38	-5.96	69.96	62.95	17.49
United Kingdom	+10.16	-15.98	+2.54	49.92	41.98	12.48
United States	+42.94	-29.64	+10.74	37.19	29.16	9.30
Switzerland	+18.70	-11.37	+4.68	37.87	43.26	9.47
Japan	+22.18	+25.18	+5.55	18.27	10.13	4.57

¹ For non-participating countries, changes in implicit exchange rates vis-à-vis the ECU rather than realignments.

² Escudo and peseta included only on September 21, 1989.

Sources: Exchange Rates: European Commission Publications; *International Financial Statistics Yearbook 1990*.

more effectively than would otherwise be possible in the solution of the dollar problem.

It would, first of all, enable the monetary authorities of a United Europe to sterilize in the form of "consols" the vast overhang of short-term dollar indebtedness inherited from former US balance-of-payments deficits and threatening at any time a collapse of the dollar on the world exchange markets. Such "consols" could recover the prestigious attraction which they held in the nineteenth century, if the US agreed to convert into ECUs, or into the creditor's currency, the deposits and securities now denominated in paper dollars and held ever more reluctantly. Such "consols", escaping exchange risks, would be a most appropriate form of investment for the European Federal Reserve Banks, commercial banks and other firms and individuals, and require lower interest rates than present dollar obligations.

Secondly, the European monetary authorities should admit that the United States cannot eliminate overnight its huge internal (budgetary) and external deficits. They should, therefore, agree to accumulate further amounts of US consols over the next two or three years, and encourage other official institutions (including the IMF), firms and individuals to do the same, as long as the US authorities commit themselves to implement jointly agreed programs in this respect.

2. The Three Stages of the Delors Plan

As far as the European Community is concerned, three stages are envisaged in the Delors plan, approved by the European Council meeting in Dublin on June 25 and 26, 1990.

Its first phase should center on a greater convergence of the economic and monetary policies of member countries and a much more rigorous coordination of their decision-making authorities. Notable in this respect is the appointment in August 1990 by the Committee of Governors of Central Banks of six top-level experts to form the core of the research department of the nascent European Central Bank.

The second - least clearly delineated - stage should center on the achievement of such a European Central Bank, on a federal model inspired by German as well as American experience, and promoting the use of the ECU:

- as a "parallel currency" substitute for the dollar in international settlements; and
- as an alternative to national currencies in domestic transactions.

Numerous policy statements of government leaders – such as Mrs Thatcher at one extreme and Chancellor Kohl at the other – have made it clear that a core of countries are determined to proceed fairly rapidly in this direction, leaving the door open for other countries, particularly the United Kingdom, to join them later, but refusing to accept any veto from them.

The unification of Germany is accelerating this progress, now seen as indispensable to build a European Germany rather than a German Europe.

Two intergovernmental conferences have been convened:

- to discuss the Treaty amendments necessary for the completion of economic and monetary union, to be ratified by national parliaments before the end of 1992; and
- to start work on the development of the Community into a political union.

3. An Irrevocable Stabilization of Exchange Rates or a Single European Currency?

Sceptics and opponents never tire of repeating the obvious, *i.e.* the difficulties – or even impossibility? – of surmounting a major obstacle: the unwillingness of national political and financial leaders to accept the mergers of sovereignties entailed in the harmonization of budgetary and monetary policies indispensable to the irrevocable stabilization of exchange rates.

Fifteen exchange-rate realignments have indeed been deemed necessary, over the twelve years of the EMS (March 1979 - March 1991) to restore sufficient equilibrium in their balances of payments to avoid:

- excessive or persistent financing of the countries in deficit by the countries in surplus; and
- as a result, an average of inflation rates unacceptable to the latter.

Germany refuses, understandably and rightly, to run the risk of becoming the "milchcow" (*vache à lait*) of inflationary Community partners! It recognizes that the EMS, as it now operates, has succeeded beyond the highest hopes of its advocates and – contrary to the dire predictions of its initial opponents, such as the Bundesbank – achieved the most essential role of any exchange-rate system, *i.e.* to stabilize real exchange rates between participating currencies, in contrast to the huge and erratic fluctuations of other currencies, particularly the dollar, *vis-à-vis* the ECU. The opponents of the ECU, on the other hand, use this very success as an argument for being satisfied with the present system and giving up the ambition of stabilizing nominal exchange rates.

Yet the stabilization of nominal exchange rates appears far more possible today than would have been imagined at the inception of the EMS.

The size and disparity of the realignments *vis-à-vis* the ECU deemed necessary over twelve years of existence of the EMS ranged in the first four years (March 1979 - March 1983) from plus 13% for Germany and 9% for the Netherlands to minus 11% for Belgium and Luxembourg, 12% for Denmark, 15% for France and 17% for Italy, but in the following seven years (March 1983 - March 1990) only from plus 8% for Germany and the Netherlands, 5% for Belgium and Luxembourg, 3% for Denmark and 0.01% for France to minus 6% for Ireland and 8% for Italy.¹⁴

The countries most determined to progress toward European unity thus now accept as realistic the stabilization of exchange rates entailed in monetary union.

Most people, however, still regard such stabilization as equivalent to the merger of national currencies into a single currency. In reality, the advantages of a merger would be enormous:

- a) obviously eliminating the billions of national currency units unnecessarily wasted today in settling daily transactions among residents of different participating countries;¹⁵

¹⁴ See Table IV.

¹⁵ Last estimated at 13-19 billion ECUs, *i.e.* about 0.5% of GDP per year for the Community as a whole, and up to 1% for smaller member states. Even more significant is the estimate that the decrease of exchange risks would stimulate a reduction of 0.5% in the rate of return demanded by market investors and thereby lead to real output gains accumulating over time to 5% of the Community's GDP.

b) making it possible to elicit from the general public stabilizing capital movements from the countries in surplus to those in deficit. The opposite is most often the case today, because mere proclamations of intent by central banks and government officials fail to convince the public that exchange-rate fluctuations are no longer possible, or even probable. The replacement of national currencies by the ECU would be much more difficult to reverse and should incite capital movements to respond primarily, or even exclusively, to interest-rate differentials. Central banks could be relied upon to push official rates in the desired direction if market forces alone did not sufficiently do so;

c) last, but not least, the promoters of the European political union would obviously regard a single currency as a vital symbol of such a union.

The actual pace of progress toward European monetary and political integration, as well as its punctual successes and failures, will be determined in the future, as they have in the past, primarily by the ability of France and Germany to lead the process through bilateral policy cooperation and institutional agreements which other Community countries are invited to join at their own pace, but with no veto from any of them, even Britain.

A momentous first step in this direction was taken in 1963 by a Franco-German treaty between President de Gaulle and Chancellor Adenauer. A second was the signing, in 1988, of two additional protocols creating a Defense and Security Council and an Economic and Financial Council.

Continuous progress has emerged since then from the bimestral meetings between the President of France and the Chancellor of Germany, and is expected to accelerate as a result of the reunification of Germany in October 1990. Everybody agrees that a European Germany is now the only possible alternative to a German Europe, and that full economic and monetary union should be achieved before January 1, 1993.

Louvain

ROBERT TRIFFIN

ANNEX

Comparison with IMF and US Statistics

My table differs considerably from the estimates of international reserves of International Financial Statistics.

1. The major difference is that the IFS tables do not include any estimates of "reserve liabilities" and "net reserves". I calculate the latter in the same way as the *Survey of Current Business* of the Commerce Department calculates the "net investment" position of the United States, *i.e.* by deducting from "US assets abroad foreign" (and international) "assets in the United States".¹

2. My reserve assets estimates also differ substantially from those published in IFS:

a) Gross reserves, with gold holdings measured at market prices and at SDR 35 per ounce, are identical to the "All Countries Total Reserves" recorded on lines 010 of the two penultimate paragraphs of IFS tables (such as on pp. 70-71 of the 1989 *Yearbook*), converted from SDRs into dollars. Their breakdown between gold holdings and total reserves minus gold (labelled "fiduciary reserves" in my table) differs substantially (by more than \$3.5 billion, for instance, at SDR 35 per ounce, rather than \$40.2 billion at market price, at the end of 1989) for the following reason. The IFS bizarrely includes under "foreign exchange, in millions of SDRs" the gold holdings held by European Community countries as swap deposits with the Bank for International Settlements (BIS) and the EMCF (European Fund for Economic Cooperation, better known as FECOM, or Fonds Européen de Coopération Monétaire), valued at contractual prices close to market prices, and whose legal ownership and attendant exchange risks are totally retained by each country separately.

¹ My table's estimates of net US reserves differ, however, from those of the *Survey* for a variety of reasons, such as:

a) the calculation of gold assets at market prices, rather than at the irrelevant official parity at which the dollar is no longer convertible into gold;

b) the inclusion of "statistical discrepancies" – formerly labelled "errors and omissions" – as unrecorded liabilities as was done until 1900, and since May 1986 in several *Federal Reserve Bulletin* articles;

c) the inclusion in the foreign official liabilities of my table of those held by foreign central banks indirectly through foreign branches of US banks, and recorded in the *Survey* as liabilities to private banks abroad.

The global value of these gold holdings, measured in SDRs, is recorded in the bottom paragraphs of the IFS gold tables (on pages 66-67, for instance, of the *1989 Yearbook*), but their regional breakdown is only included at SDR 35 per ounce – and not at market price – in the IFS “Total Reserves” tables.

My table calculates their value:

– at SDR 35 per ounce, by deducting from these IFS “Total Reserves” tables my estimates of “Total Reserves minus Gold”, corrected as indicated above, *i.e.* excluding gold swaps with the FECOM and the BIS;

– at market price, by multiplying these SDR 35 per ounce estimates by the ratio between the IFS global estimates of gold at market price and at SDR 35 per ounce.

b) The IFS tables use different – and therefore non-additive – units of measurement: the SDR for fiduciary assets, ounces for gold assets, and either SDR 35 per ounce of gold or the gold market price for the gold component of total reserves.

I use instead the US dollar as a uniform measurement unit:

– in order to make possible the addition of regional estimates into world estimates;

– because international settlements, reserve assets and reserve liabilities are still contracted mostly in dollars, the SDR unit of measurement being used only for IMF transactions which constitute an insignificant fraction of global settlements and reserve accumulation. These dollar estimates can, of course, be converted easily into ECUs, Deutsche Mark, or any other currency today deemed more appropriate than the dollar for the analysis of monetary developments in different parts of the world for which the dollar valuation is becoming less significant than was the case in former years.

It should be noted that these obvious shortcomings of IFS and *Survey of Current Business* statistical estimates are unfortunately carried over in most other standard statistical publications, such those of the Organization for Economic Cooperation and Development (OECD), and therefore partly invalidate the economic analysis of the books and articles based on them.

General Note on Statistical Tables

1. All statistics are measured in billions of US dollars (with one decimal), their *International Financial Statistics* measurement in SDRs having become irrelevant in view of the unsuitable current definition of the SDR as a unit of account, based primarily on the last official definition of the US dollar now inconvertible into gold or foreign currencies.

2. My tables include the “statistical discrepancy” (formerly labelled “Errors and Omissions”) with reverse sign, under capital transaction, as was done until 1900 in *Historical Statistics* and is done today in various articles of the *Federal Reserve Bulletin* (but beginning only in 1959, which accounts for a slight difference of \$8.6 billion between my estimates and those of the *Bulletin*). This procedure undoubtedly overstates somewhat capital transaction estimates, but less than it is understated by their total exclusion in the *Survey of Current Business*.

3. Insignificant apparent addition errors are due to rounding to closest decimal.

4. “–” means less than \$50 million.

5. “x” means nil by definition.

6. All the annex tables (except Foreign Exchange liabilities) are calculated from the most recent *International Financial Statistics Yearbooks* and their June 1991 monthly issue, corrected for the erroneous inclusion of official and Bank for International Settlements gold “swaps” as foreign exchange.

TABLE I

CREDIT RESERVES
(\$ billion)

Year end	1949	1959	1969	1979	1986	1987	1988	1989	1990
ASSETS	12.6	19.5	40.2	313.2	476.1	674.2	689.3	736.5	865.8
United States	1.5	2.0	5.1	7.8	37.5	34.7	36.7	63.6	72.3
Rest of World	11.1	17.5	35.1	305.4	438.6	639.5	652.6	672.9	793.5
Industrial World	4.6	10.5	20.9	148.2	233.6	379.1	397.1	398.6	477.9
Third World	6.5	6.9	14.34	157.2	205.1	260.3	255.5	274.4	315.7
OPEC	0.5	1.6	2.8	72.3	61.6	67.6	55.8	56.3	60.6
Other	6.0	5.3	11.4	84.8	143.5	192.7	199.7	218.1	253.1
LIABILITIES	-11.1	-17.1	-38.6	-309.3	-476.2	-672.7	-687.4	-742.1	-869.1
United States	-3.2	-10.6	-18.9	-214.7	-304.9	-432.4	-430.7	-436.7	-474.6
Rest of World	-7.9	-6.5	-19.7	-94.6	-171.3	-240.3	-256.7	-305.4	-394.5
Industrial World	-7.8	-6.1	-18.4	-81.4	-122.7	-189.4	-212.9	-258.5	-349.1
Third World	-0.1	-0.4	-1.3	-13.2	-48.7	-50.8	-43.8	-46.9	-45.5
OPEC	-	-	-0.1	-1.0	-1.9	-2.8	-2.6	-4.2	-6.3
Other	-0.1	-0.4	-1.1	-12.3	-46.8	-48.0	-41.2	42.7	-39.2
NET ASSETS	+1.5	+2.3	+1.7	+3.8	-0.1	+1.4	+2.0	+5.6	-3.3
United States	-1.7	-8.6	-13.8	-206.9	-267.4	-397.7	-394.0	-373.1	-402.3
Rest of World	+3.2	+11.0	+15.4	+210.7	+267.3	+399.1	+396.0	+367.5	+399.0
Industrial World	-3.3	+4.4	+2.4	+66.8	+110.9	+189.7	+184.2	+140.1	+122.8
Third World	+6.4	+6.6	+13.0	+143.9	+156.4	+209.5	+211.7	+227.5	+270.2
OPEC	+0.5	+1.6	+2.7	+71.4	+59.7	+64.8	+53.2	+52.1	+54.3
Other	+5.9	+5.0	+10.3	+72.6	+96.7	+144.7	+158.5	+175.4	+215.9
Dollars per SDR	1.00	1.00	1.00	1.3173	1.2232	1.4187	1.3457	1.3142	1.4227

TABLE IA

CREDIT RESERVES: FOREIGN EXCHANGE
(\$ billion)

Year end	1949	1959	1969	1979	1986	1987	1988	1989	1990
ASSETS	10.9	16.2	33.5	281.2	409.1	600.8	624.2	676.1	805.1
United States	-	-	2.8	3.8	17.3	13.1	17.4	44.6	52.2
Rest of World	10.9	14.2	30.7	277.4	391.8	587.7	606.8	631.5	750.9
Industrial World	4.9	9.4	18.0	129.7	205.8	348.4	366.5	368.6	444.5
Third World	6.0	6.8	12.7	147.7	186.0	239.4	240.3	262.9	306.4
OPEC	0.5	1.6	2.7	67.0	46.3	51.3	44.5	48.9	55.4
Other	5.5	5.2	10.1	80.7	139.7	188.1	197.8	214.0	251.0
LIABILITIES (-)	-10.9	-16.2	-33.5	-281.2	-409.1	-600.8	-624.2	-676.1	-803.1
United States	-3.2	-10.6	-18.9	-214.7	-304.9	-432.4	-430.7	-436.7	-474.6
Rest of World	-7.7	-6.1	-15.5	-70.8	-110.3	-175.4	-200.1	-245.8	-335.5
Industrial World	-	-	-	-	-	-	-	-	-
Third World	-	-	-	-	-	-	-	-	-
OPEC	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
NET ASSETS	x	x	x	x	x	x	x	x	x
United States	-3.2	-10.1	-15.2	-206.7	-281.6	-412.3	-406.7	-385.7	-415.4
Rest of World	+3.2	+10.1	+15.2	+206.7	+281.6	+412.3	+406.7	+385.7	+415.4
Industrial World	-2.8	+3.4	+2.5	+58.9	+95.5	+173.0	+166.4	+122.8	+109.1
Third World	+6.0	+6.8	+12.7	+147.8	+186.0	+239.4	+240.3	+262.9	+306.4
OPEC	+0.5	+1.6	+2.7	+67.0	+46.3	+51.3	+44.5	+48.9	+55.4
Other	+5.5	+5.2	+10.1	+90.7	+139.7	+188.1	+197.8	+214.0	+251.0

Sources and Notes:

Assets are the IFS estimates, converted into dollars, but corrected as indicated in the Note on p. 427.

Liabilities, whose world total is, by definition, equal to Assets, are distributed between the United States and other industrial countries according to their currency composition as estimated in IMF *Annual Reports on*, for the latest three years (1988-1990) in the *Report of the Deutsche Bundesbank for the Year 1990*, p. 67, with insignificant adjustments to reconcile them with reported total liabilities.

U.S. liabilities may be slightly overestimated by the inclusion of \$10 billion to \$22 billion statistical discrepancies in the estimated \$422 billion to \$468 billion totals.

TABLE IB

IMF ACCOUNTS
(\$ billion)

Year end	1949	1959	1969	1979	1986	1987	1988	1989	1990
ASSETS	1.7	3.3	6.7	31.9	67.1	73.3	65.2	60.4	62.7
United States	1.5	2.0	2.3	4.0	20.1	21.6	19.4	19.0	20.1
Rest of World	0.2	1.3	4.4	27.9	47.0	51.7	45.8	41.4	42.6
Industrial World	0.1	1.1	3.6	18.5	27.7	30.6	30.4	29.9	33.4
Third World	0.1	0.2	0.8	9.4	19.3	21.1	15.4	11.5	9.3
OPEC	-	-	0.2	5.3	15.3	16.2	11.3	7.4	5.2
Other	0.1	0.2	0.6	4.1	3.9	4.9	4.1	4.1	4.1
LIABILITIES ¹	-0.2	-0.9	-5.1	-28.1	-67.1	-71.9	-63.2	-66.0	-66.0
United States	-	-0.5 ²	-1.0 ²	-4.2	-6.0	-7.0	-6.6	-6.4	-7.0
Rest of World	-0.2	-0.4	-4.1 ²	-23.9	-61.1	-64.9	-56.6	-59.6	-59.0
Industrial World	-0.1	-0.1	-2.8 ³	-10.7	-12.4	-14.0	-12.8	-12.7	-13.6
Third World	-0.1	-0.3	-1.3	-13.2	-48.8	-50.8	-43.8	-46.9	-45.5
OPEC	-	-	-0.1	-1.0	-1.9	-2.8	-2.6	-4.2	-6.3
Other	-0.1	-0.3	-1.1	-12.3	-46.8	-48.0	-41.2	-42.7	-39.2
NET ASSETS	+1.5	+2.3	+1.7	+3.8	-	+1.4	+2.0	-5.6	-3.3
United States	+1.5	+1.5	+1.3	-0.2	+14.1	+14.7	+12.8	+12.6	+13.1
Rest of World	-	+0.8	+0.4	+4.0	-14.1	-13.3	+10.8	-18.2	-16.4
Industrial World	-	+1.0	+0.8	+7.8	+15.3	+16.5	+17.6	+17.2	+19.8
Third World	-	-0.1	-0.4	-3.8	-29.4	-29.6	-28.6	-35.4	-36.2
OPEC	-	-	+0.1	+4.3	+13.4	+13.4	+8.7	+3.2	-1.1
Other	-	-0.1	-0.5	-8.1	-42.9	-43.1	-37.2	-38.6	-35.1

¹ Including "contingent liabilities" for SDR allocations.

² IMF gold deposits and investments: \$500 million in 1959 and \$1,019 million in 1969.

³ Of which \$40 million IMF gold deposits and investments.

TABLE IB1

SDR ACCOUNTS
(\$ billion)

Year end	1979	1986	1987	1988	1989	1990
ASSETS (Holdings)	16.4	23.8	28.7	27.1	26.9	29.0
United States	2.7	8.4	10.3	9.6	10.0	11.0
Rest of World	13.7	15.4	18.4	17.5	16.9	18.0
Industrial World	9.6	11.3	13.0	14.0	13.3	14.1
Third World	4.2	4.2	5.4	3.5	3.7	3.9
OPEC	1.4	2.1	2.6	1.4	1.7	1.3
Other	2.8	2.0	2.7	2.1	2.0	2.6
CONTINGENT LIABILITIES (Allocations) ¹	-17.6	-22.6	-30.4	-28.8	-28.2	-30.5
United States	-4.2	-6.0	-7.0	-6.6	-6.4	-7.0
Rest of World	-13.4	-20.2	-23.4	-22.2	-21.8	-23.5
Industrial World	-8.4	-11.7	-13.5	-12.8	-12.5	-13.6
Third World	-5.0	-8.6	-9.9	-9.4	-9.2	-10.0
OPEC	-1.0	-1.8	-2.1	-2.0	-2.0	-2.9
Other	-4.5	-6.7	-7.8	-7.4	-7.2	-7.1
NET ASSETS	-1.1	-2.4	-1.7	-1.7	-1.2	-1.5
United States	-1.4	+2.4	+3.3	+3.0	+3.5	+4.0
Rest of World	+0.3	-4.8	-5.0	-4.7	-4.7	-5.5
Industrial World	+1.1	-0.4	-0.5	+1.2	+1.7	+0.5
Third World	-0.8	-4.4	-4.5	-5.9	-5.5	-6.1
OPEC	+0.4	+0.3	+0.5	-0.6	-0.3	-0.8
Other	-1.2	-4.7	-5.1	-5.3	-5.2	-5.3

¹ Only in case of withdrawal or liquidation; not mentioned in IFS estimates

TABLE IB2

IMF CREDITS AND INVESTMENTS
(\$ billion)

Year end	1949	1959	1969	1979	1986	1987	1988	1989	1990
ASSETS (Reserve Position)	1.7	3.3	6.7	15.5	43.2	44.6	38.0	33.5	33.8
United States	1.5	2.0	2.3	1.3	11.7	11.4	9.7	9.0	9.1
Rest of World	0.2	1.3	4.4	14.2	31.5	33.2	28.3	24.5	24.7
Industrial World	0.1	1.1	3.6	8.9	16.4	17.5	16.5	16.6	19.3
Third World	0.1	0.2	0.8	5.3	15.1	15.8	11.8	7.8	5.4
OPEC	-	-	0.2	3.9	13.2	13.6	9.7	5.7	3.9
Other	0.1	0.2	0.6	1.4	1.9	2.2	2.0	2.1	1.5
LIABILITIES	-0.2	-0.9	-5.1	-10.5	-40.9	-41.5	-34.4	-31.3	-35.5
United States	-	-0.5	-1.0	-	-	-	-	-	-
Rest of World	-0.2	-0.4	-4.1	-10.5	-40.9	-41.5	-34.4	-31.3	-35.5
Industrial World	-0.1	-0.1	-2.8	-2.2	-0.7	-0.5	-	-	-
Third World	-0.1	-0.3	-1.3	-8.3	-40.2	-41.0	-34.4	-31.3	-35.5
OPEC	-	-	-0.1	-	-0.1	-0.7	-0.6	-2.2	-4.2
Other	-0.1	-0.3	-0.1	-8.3	-40.2	-40.3	-33.8	-29.1	-31.3
NET ASSETS	+1.5	+2.3	+1.7	+5.0	+2.4	+3.2	+3.7	+2.2	-1.7
United States	+1.5	+1.5	+1.3	+1.3	+11.7	+11.4	+9.7	+9.0	+9.1
Rest of World	-	+0.8	+0.4	+3.7	-9.4	-8.2	-6.0	-6.8	+10.8
Industrial World	-	+1.0	+0.8	+6.3	+15.7	+17.0	+16.5	+16.6	+19.3
Third World	-	-0.1	-0.4	-2.6	-25.1	-25.2	-22.5	-23.5	-30.1
OPEC	-	-	+0.1	+3.9	+13.1	+12.9	+9.2	+3.5	-0.3
Other	-	-0.1	-0.5	-6.5	-38.2	-38.1	-31.8	-27.0	-29.8

TABLE II

GOLD RESERVES
(\$ billion)

ASSETS	1949	1959	1969	1979	1986	1987	1988	1989	1990
At Market Price	32.7	37.7	38.7	531.9	408.7	504.8	430.1	418.2	401.1
United States	24.4	19.5	11.9	135.5	102.4	127.0	107.4	105.0	100.8
Rest of World	8.3	18.2	26.8	396.4	306.3	377.8	322.7	313.2	300.3
Industrial World	5.3	14.4	21.1	329.9	250.1	308.9	262.5	255.1	244.6
Third World	3.0	3.8	5.7	66.6	56.2	68.9	60.2	58.0	55.6
OPEC	0.7	0.9	1.3	18.8	17.1	21.1	17.9	17.5	16.6
Other	2.3	2.8	4.4	47.8	39.1	47.8	42.3	40.5	39.0
At \$35 per ounce	33.0	37.6	38.5	36.4	36.6	36.5	36.7	36.5	36.5
United States	24.6	19.5	11.9	9.3	9.2	9.2	9.2	9.2	9.2
Rest of World	8.4	18.1	26.6	27.1	27.4	27.3	27.5	27.3	27.3
Industrial World	5.4	14.3	22.0	22.5	22.4	22.3	22.4	22.3	22.2
Third World	3.0	3.8	4.7	4.6	5.0	5.0	5.1	5.1	5.1
OPEC	0.7	0.9	1.3	1.3	1.5	1.5	1.5	1.5	1.5
Other	2.3	2.8	3.4	3.4	3.5	3.5	3.6	3.5	3.5
Gold Premium	-0.3	0.1	0.2	495.5	372.1	468.3	393.4	381.7	364.6
United States	-0.2	-	0.1	126.2	93.2	117.8	98.2	95.8	91.6
Rest of World	-0.1	0.1	0.1	369.3	278.9	350.5	295.2	285.9	273.0
Industrial World	-	0.1	0.1	307.3	227.7	286.6	240.1	233.0	222.4
Third World	-	-	-	62.0	51.2	63.9	55.1	52.9	50.5
OPEC	-	-	-	17.5	15.6	19.6	16.4	16.0	15.1
Other	-	-	-	44.5	35.6	44.3	38.7	37.0	35.5

TABLE III

TOTAL RESERVES
(\$ billion)

Year end	1949	1959	1969	1979	1986	1987	1988	1989	1990
GROSS	45.2	57.2	79.0	845.1	884.9	1179.0	1119.4	1154.6	1266.9
United States	25.8	21.5	17.0	143.3	139.9	161.7	144.2	168.6	173.1
Rest of World	19.4	35.7	62.0	701.8	745.0	1017.3	1075.2	986.0	1093.8
Industrial World	10.4	24.9	43.7	478.1	483.7	688.0	659.6	653.7	722.5
Third World	9.0	10.7	18.2	223.8	261.3	329.2	315.6	332.3	371.3
OPEC	1.2	2.5	4.1	91.1	78.7	88.7	73.7	73.8	77.2
Other	7.8	8.2	14.1	132.7	182.6	240.6	241.9	258.6	294.2
NET = Gold + Net IMF	34.1	40.1	40.4	535.8	408.7	506.2	433.1	412.6	397.8
United States	25.9	21.0	13.2	135.3	116.5	141.7	120.2	117.6	113.9
Rest of World	8.2	19.1	27.2	400.5	292.2	364.5	311.9	295.0	283.9
Industrial World	5.3	15.4	22.9	337.7	265.4	325.4	281.1	272.3	264.4
Third World	3.0	3.7	4.3	62.8	26.8	39.3	31.6	22.6	19.4
OPEC	0.7	0.9	1.4	23.1	30.5	34.5	26.6	20.7	15.5
Other	2.3	2.7	2.9	39.7	-3.8	4.7	5.1	1.9	3.9
GOLD at Market Price	32.7	37.7	38.7	531.9	408.7	504.8	430.1	418.1	401.1
United States	24.4	19.5	11.9	135.5	102.4	127.0	107.4	105.0	100.8
Rest of World	8.3	18.2	26.8	396.4	306.3	377.8	322.7	313.2	300.3
Industrial World	5.3	14.4	21.1	329.9	250.1	308.9	262.5	255.1	244.6
Third World	3.0	3.8	5.7	66.6	56.2	68.9	60.2	58.0	55.6
OPEC	0.7	0.9	1.3	18.8	17.1	21.1	17.9	17.5	16.6
Other	0.3	2.8	4.4	47.8	39.1	47.8	42.3	40.5	39.0
NET IMF	1.5	2.3	1.7	3.8	-	1.4	2.0	5.6	3.3
United States	1.5	1.5	1.3	-0.2	14.1	14.7	12.8	12.6	13.1
Rest of World	-	0.8	0.4	4.0	-14.1	-13.3	-10.8	-18.2	-16.4
Industrial World	-	1.0	0.8	7.8	15.3	16.5	17.6	17.2	19.8
Third World	-	-0.1	-0.4	-3.8	-29.4	-29.6	-28.6	-35.4	-36.2
OPEC	-	-	0.1	4.3	13.4	3.4	8.7	3.2	-1.1
Other	-	-0.1	-0.5	-8.1	-42.9	-43.1	-37.2	-38.6	-35.1