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SM/90/141  
Supplement 2

December 18, 1990

To: Members of the Executive Board  
From: The Secretary  
Subject: SDR Valuation Basket - Revision and Trial Calculations

Attached for the information of the Executive Directors is a paper on the revision of the SDR basket and trial calculations using the latest available exchange rates. Please note that the actual calculation will be made on December 31, 1990. It will be proposed at that time that Rule 0-1 specifying the currency amounts of the SDR valuation basket be amended on the basis of a lapse of time period ending at 1:00 p.m. that day.

Every effort will be made to circulate the paper containing the above proposal to each Executive Director's office no later than 10:30 a.m. on Monday, December 31, 1990.

Mr. Roncesvalles (ext. 7800) or Mr. Nocera (ext. 7807) is available to answer technical or factual questions relating to this paper.

Att: (1)

Other Distribution:  
Department Heads

INTERNATIONAL MONETARY FUND

SDR Valuation Basket--Revision and Trial Calculation

Prepared by the Treasurer's Department

Approved by David Williams

December 17, 1990

In accordance with the Executive Board decisions on the method of valuation of the SDR and the guidelines for the calculation of the currency amounts of the SDR valuation basket, it will be necessary to determine on December 31, 1990, the amounts of the five currencies in the SDR valuation and interest rate baskets, effective January 1, 1991. 1/ Paragraphs 3b and 4 of the 1980 Decision require respectively that (i) the currency amounts correspond to the given set of agreed weights for the revised basket when applied to the average exchange rates over the reference period of three months preceding the coming into effect of the revised basket and (ii) the new basket will have the same transactions value for the SDR as the existing basket on the last working day before the basket comes into effect on January 1, 1991. 2/

This Supplement shows trial calculations of the currency amounts in the revised SDR valuation basket (Table 1). These illustrative calculations have been based on a three-month period ended November 30, 1990, and also on the period from October 1-December 14, 1990. The actual calculation on December 31, 1990 will be based on the three-month period from October 1-December 31, 1990.

As indicated in SM/90/141 (7/16/90), the new currency amounts are to be rounded according to the guidelines established in 1985, whereby they are expressed in two significant digits, provided that the resulting weights do not differ from the initial weights by more than one-half percentage point for any currency. If no solution is found at the two-digit level, the currency amounts are expressed in three significant digits. (The process may be repeated to find a solution at four significant digits.) If multiple

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1/ Decision No. 9549-(90/146) adopted October 5, 1990, and Decision No. 6631-(80/145) G/S, adopted September 17, 1980, and Decision No. 8160-(85/186) G/S, adopted December 23, 1985. In accordance with these decisions, Rule O-1, which specifies the amounts of the currencies in the SDR valuation basket, will be amended on December 31, 1990, effective January 1, 1991.

2/ The new percentage weights to be used for the basket effective January 1, 1991 are: U.S. dollar, 40 percent; deutsche mark, 21 percent; Japanese yen, 17 percent; French franc, 11 percent; and pound sterling, 11 percent.

solutions are found at any level of significant digits, the solution with the smallest average deviation between the initial currency amounts and the rounded currency amounts will be employed. 1/

Table 2 shows the calculation of the SDR interest rate and rates on SDR-denominated assets using the results of the trial calculation presented in Table 1, and the latest exchange rates and interest rates available on December 14, 1990. Table 2 also shows the impact of using the new instruments agreed for the SDR interest rate basket for the Japanese yen and French franc components.

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1/ See SM/90/141 (7/16/90), pp. 28 and 29. The guidelines for rounding the currency amounts are reproduced in Appendix IV of SM/90/141.

Table 1. Trial Calculation of Amounts of Currency Units in the Revised SDR Valuation Basket

Currencies (1)	Base period average exchange rates (In US\$ per unit) (2)	Transition date exchange rates (In US\$ per unit) (3)	Unrounded units (4)	Rounded units (5)	U.S. dollar equivalents (col. (3) x col. (5)) (6)
1. Using September 1-November 30 as base period					
U.S. dollar	1.0	1.0	0.569292	0.569	0.569000
Deutsche mark	0.65588976	0.66458430	0.455684	0.455	0.302386
Japanese yen	0.00756974	0.00750638	31.962691	32.1	0.240955
French franc	0.15482210	0.19688915	0.800868	0.800	0.157511
Pound sterling	1.93136308	1.93720000	0.081059	0.0810	0.156913
Total					1.426765 <u>1/</u>
2. Using October 1-December 14 as base period					
U.S. dollar	1.0	1.0	0.574683	0.576	0.576000
Deutsche mark	0.66584192	0.67544748	0.453123	0.453	0.305978
Japanese yen	0.00769495	0.00755458	31.74035	31.5	0.237969
French franc	0.19794634	0.19884669	0.798387	0.800	0.159077
Pound sterling	1.95187636	1.94150000	0.080967	0.0811	0.157456
Total					1.436480 <u>1/</u>
<u>Memorandum item:</u>	<u>Existing basket</u>		<u>New basket</u>		
	Currency units	Initial weight	Initial weight		
U.S. dollar	0.452	0.42	0.40		
Deutsche mark	0.527	0.19	0.21		
Japanese yen	33.4	0.15	0.17		
French franc	1.02	0.12	0.11		
Pound sterling	0.0893	0.12	0.11		

1/ Equal to the SDR value on the transition date based on current basket.

Table 2. Shifts in Combined Market Interest Rates on SDR-Denominated Assets  
Based on Hypothetical Revision of the SDR Valuation Basket

	U.S. dollar (1)	Deutsche mark (2)	French franc (3)	Japanese yen (4)	Pound sterling (5)	Combined market interest rates		
						Present basket (6)	Hypothetical revised basket (7)	Difference cols. (7-6) (8)
<u>Currency amounts</u>								
Present basket	0.452	0.527	1.02	33.4	0.0893			
Revised basket <u>1/</u>	0.576	0.453	0.800	31.5	0.0811			
<u>Interest rates on Fund-related assets <u>1/</u></u>								
SDR:								
Three-month maturity								
Based on current set of instruments	7.06	9.05	10.19	8.27	13.49	8.98	8.73	-0.25
Based on modified set of instruments <u>2/</u>	7.06	9.05	9.63	8.27	13.49	8.90	8.67	-0.23
Fund borrowing:								
Domestic instruments								
Six-month maturity	7.21	9.15	10.25	8.28	12.97	9.00	8.77	-0.23
One-year maturity	7.24	9.02	10.58	7.65	11.41	8.73	8.51	-0.21
Five-year maturity	7.82	9.04	10.72	7.10	10.91	8.78	8.62	-0.16
Eurocurrency instruments								
Three-month maturity	8.00	9.31	10.09	8.31	13.56	9.35	9.17	-0.17
Six-month maturity	7.88	9.38	10.16	8.31	12.93	9.26	9.07	-0.18

<sup>1/</sup> Based on most recent available data as of December 14, 1990.

<sup>2/</sup> The modified set of instruments reflects the changes agreed to the interest rate basket, i.e. the use of the Treasury bill rate instead of the interbank rate for France, and of the three-month CD rate instead of the two-month private bill rate for Japan.