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D. PROGRAMMING AND BUDGETING

1. This note briefly reviews the Bank's budget process and highlights concerns over level and deployment of the Bank's budget. The review of the budget process makes reference to the management processes by which the Bank Group sets its operational goals, formulates its work programs and monitors its actual achievements against plans and programs. The attachment to this note presents the frequencies and dates for major elements in the Bank's programming and budgeting processes (Attachment 1).

Country Programming

2. At the country level, the Bank's operational goals are set through country assistance planning. This is the basic process in the Bank's programming system by which the institution defines its relations with its developing member countries and directs its activities in lending, technical assistance, economic and sector work, aid coordination, etc., in support of the development of these member countries.

3. For each borrowing member country, the staff periodically prepares a country program paper, or CPP, which is reviewed by senior management. This CPP outlines the country's development strategy, assesses the country's progress in implementing its strategy, defines the Bank's assistance strategy vis-a-vis that country, and presents a country assistance plan, which describes the Bank's lending and other operational work for a five-year period.

4. The country lending programs advanced in the CPPs in turn become the subject of a Bankwide review to ensure that the sum of the country lending plans is responsive to Bankwide policy and consistent with constraints on the availability of IDA and IBRD funds.

5. This Bankwide review, which is an important preparatory step in the formulation of operational work programs and budgets, is scheduled so that it precedes the start of the budget process. Other important preparatory steps are a detailed Bankwide review of country economic and sector work, a retrospective review of the previous fiscal year's program and budget, and the midyear review of the current fiscal year's work program and budget.

Budget Process

6. Based on these preparations, the budget process is launched in December by the preparation of a Budget Issues Paper in which the Programming and Budgeting Department (PAB) provides a Bankwide overview of operational goals coupled with an indicative Bankwide estimate regarding the staff and budget required to achieve these operational goals. This paper is cleared with the President and sets the limits within which the budget guidelines are formulated. Next, work program and budget guidelines are issued by PAB for each Vice Presidential unit. These guidelines reconfirm the operational goals assigned to each unit, specify the basis for costing of the various operational tasks and invite the Bank's managers to prepare their

detailed work program and budget proposals according to a prescribed format.

7. In the case of the Regional Offices and the central operating departments, these guidelines also request that the work program and budget proposals refer to the expected outcome of the current fiscal year and provide a five-year perspective for each major work program category.

8. The work program and budget proposals prepared by the Bank's Vice Presidential units in response to these relatively broad guidelines are reviewed in detail by PAB and issues posed by the guidelines become the subject of discussions between the respective Vice President and PAB.

9. The outcome of these discussions is summarized in a memorandum which, unit by unit, presents PAB's work program and budget recommendations to the President for his review and approval. Unresolved issues between the Bank's managers and PAB are presented in this memorandum for the President's decision. Based on this memorandum, the President considers the merits of the Bankwide budget proposal.

10. As the last step in the budget formulation, PAB revises the budget in line with the President's decisions and prepares the President's budget recommendations for presentation to the Board.

While the formulation of the budget blends elements of program budgeting and budgeting for organizational units, the Board document essentially presents a program budget with few references to the budgets of organizational units.

Judging Efficiency of Operations

11. In the absence of other objective norms, the operational efficiency and experience of previous years (generally captured in the form of 3-year moving averages) provides the criteria by which the merit and feasibility of departmental work programs and budget proposals is judged. For instance, budgeting for lending work (FY81 budget: \$106 million) takes account of the department's capacity as evidenced by the number and sector mix of projects worked on in past years, as well as the status of the department's inventory of projects under preparation. In consultation with the Senior Vice President for Operations, a judgment on the feasibility of the department's operational goals is made. Next, the review shifts to the analysis of lending costs. This involves a review of the department's cost experience over the course of the previous three years, and projection of lending costs, taking account of such factors as sector mix, size and complexity of projects, government attitudes, etc.

12. In budgeting for project supervision work (FY81 budget: \$57 million), the development of annual average supervision costs per project by Region and sector is the subject of detailed review. While

special care is taken to ensure that Bank assistance in project implementation is adequate to supervise the end-use of Bank funds and to support the borrower without substituting Bank efforts for Government efforts, the opportunity is also taken to reconfirm that project supervision is ultimately the responsibility of the borrower.

13. Budgeting for economic and sector work (FY81 budget: \$34 million) takes advantage of a programming and review system, which brings the combined judgment of Regional economic staff, Development Policy Staff, Central Projects Staff and PAB to bear on specific proposals for country economic and sector work. Based on staff work by the central departments, Bankwide judgments on level, deployment and priority content of the regional programs are reached in meetings between the Regional Vice Presidents and the Senior Vice President for Operations.

14. Overall, the review of operating programs involves a systematic, zero-based examination of budget requirements for a clearly identified set of operational tasks. In addition, the budget proposals are reviewed with special attention to the proposed balance between departmental staff, use of consultants, support from other parts of the Bank, and use of the Bank's cooperative programs with FAO, WHO, UNESCO and UNIDO. Analysis of past years' work programs provides reference points by which to judge the feasibility and cost effectiveness of the proposed manpower balances.

15. Budgeting for the Bank's support functions, to the extent feasible, employs input/output ratios which capture key relationships between operational work and support functions. The extent to which these input/ output ratios should reflect economies to scale in the Bank's administrative processes is one of the most important unresolved budget issues. Special efforts are under way to strengthen the programming and budget process in the administrative programs of the Bank.

16. Overall, the budget process is designed to track the Bankwide input/output relationships with reference to a set of "ratios" which, captured in the attached formats (Table VIj and Annex Table 22), are being used by Senior Management to monitor the overall efficiency of Bank operations. At the level of individual departments the budget process is increasingly being used to induce the Bank's managers to construct their budgets task-by-task so as to allow review of budget proposals with reference to past input/output relationships, either in the same department or in other parts of the Bank. Equally important, the programming and budgeting system is also increasingly being used by individual managers to monitor actual costs against planned costs. To the extent that this monitoring takes place against fairly detailed program cost categories, it is gradually introducing a reasonable level of cost consciousness into the management of the Bank's operations.

Areas Needing Attention

17. In formulating the Bank's budget it has been the goal to maintain on average a rate of real growth in the Bank's administrative expenses slightly below or equal to the real growth in the volume of lending operations. Maintenance of this crude but basic measure of Bank Group efficiency has been considered essential in order to be responsive to the concerns expressed by different parts of the Bank's constituency over the growing size and the efficiency of the Bank. As we understand these concerns, they do not challenge the current broad perception of the Bank's developmental mission and its operation as a "full-service" institution, but derive from the view that a \$400 million budget which is allowed to grow in step with real growth in commitment capacity should be adequate to give the Bank the resources to respond to the changing demands of the '80s, provided continued emphasis is being placed on agile, cost-conscious management at all levels of the institution.

18. While there seems to be a consensus that the budget should not grow faster than the Bank's lending output, this goal recently has proven unattainable. In the years FY76-80 total administrative expenses have increased at an average rate of 5.8% per year compared to an increase in real commitment levels of 4.4% per year and a rate of increase in the number of lending operations of 5.3% per year. Our work on longer-term budget perspectives indicates similar, if not

greater, difficulties in attaining this goal in the years ahead. Moreover, even if this goal were to be attained, our projections based on current input/output relationships and rather optimistic assumptions about improvements in operational efficiency indicate that 5% real growth per annum in Bank lending would by the late '80s require the employment of about 4,000 professionals with an administrative budget of the order of \$650 million in constant 1981 dollars. In view of the concerns which are already being expressed about the present size of the Bank (2,500 professionals and a budget of \$400 million), this extrapolation further highlights the need to question the longer-term viability of our present modus operandi and the resultant input/output relationships.

19. In the near term we consider it important that the following actions be taken to contain budget growth within the desired limits:

- the special program component of the budget which funds programs which are entirely discretionary will have to be determined with more selectivity and with reference to an explicit budget constraint.
- The average input/output relationships in operational activities need to be reviewed and where possible reset on the basis of an increased reliance on task-specific budgeting. In connection with this review, questions should be raised about the continued cost-effectiveness

and affordability of several aspects of the Bank's current modus operandi. In this context earliest attention needs to be given to the cost-effectiveness of the internal project documentation and quality assurance processes.

- The workings of the Bank's programming and budgeting system need to be reexamined at all levels with the view to enhancing the incentives which these processes provide for efficient conduct of Bank operations. Specifically, budgeting for lending and supervision work which together account for half of the Bank's budget is still too mechanical and too dependent on historical cost experience. Moreover, budgeting for these operational activities is perceived as perpetuating past inefficiencies and penalizing the efficient, cost-conscious operational managers. Overall, the budget process needs to be extended in a consistent manner beyond the scope of the centralized system into the departments and divisions.

- A productivity improvement strategy designed to offset the costs of improving the quality of Bank operations needs to be formulated and implemented. Promising areas for productivity improvement are: investments in data

management, and improvements in general computing support for the Bank's highly paid professional staff. Increased employment of qualified local contract staff by an expanded network of operational field offices should also be explored.

- A program review process needs to be put in place outside the budget process to ensure that programs which have lost their priority claims on the Bank's resources are identified and phased out in an orderly fashion to set resources free for new, high priority initiatives.

In operations this will require a sector-by-sector review of the relatively costly sectoral diversity of the Bank's present lending activities and a reassessment of the balance between banking and free consulting services in the Bank's assistance to its higher income borrowers.

In special programs this will require a zero-based examination of the Bank's non-banking functions and the exercise of increased selectivity in the expansion of these discretionary programs.

In support programs this will require further progress toward the formulation of explicit service standards and cost/performance criteria based on standards set by

comparator organizations which are working under the discipline of the market.

All of the above actions will require that a strategic planning exercise be mounted to examine the Bank's current operational objectives and options relative to the longer-term assistance needs of the Bank's borrowing member countries. This planning exercise should include an explicit reassessment of the longer-term viability of the Bank's present modus operandi in terms of its implications for the growth of the institution and the deployment of its staff and budget resources.

Specific, actionable proposals in each of these areas could be developed upon completion of the FY82 budget process.

Frequencies and Dates for Major Elements in the
Bank's Programming and Budgeting Processes

Fiscal Year: July 1 to June 30

Planning and Programming Frame: Rolling five-year plans with "firm" targets, ceilings, etc. for year one. A Synopsis of the FY81 Programs and Budgets is attached (Attachment II).

Review of Country Programs: For major borrowing countries a Senior Management Review of the country program is to be held every 12-18 months. Programs for other borrowing countries are to be reviewed on a 3-year cycle.

Bankwide Lending Program Review: All country lending allocations are being reviewed once-a-year generally in March/April with up-date of these allocations before the start of the budget process in November.

Work Program and Budget Formulation: - Start of annual budget process: December

- Budget recommendations to President: April
- Budget recommendations to Board: May
- Board review of programs and budgets: June
- formal allocation/confirmation of budgets to departments: July

Program and Budget Monitoring:

- Retrospective Review of Previous Year's Program and Budget by Management: October/November
- Midyear Review with Board: February
- Review of Status of IBRD/IDA Lending Program for current and subsequent fiscal year: Monthly Report to Senior Management
- Review of Loans and Credits Ready for Board Consideration (Board Schedule): Weekly memo covering next three months' schedule
- Review of loans/credits under implementation: Twice a year, with report

to Board in April

- Board Reviews of following programs in addition to current Bankwide program and budget review:
 - Research Programs (March)
 - Economic Development Institute (May)
 - Operations Evaluation (April)
 - Structural Adjustment Lending (April)
 - Grant Assistance Programs

SUMMARY OF FY80 AND FY81 PROGRAMS AND BUDGETS

	FY80			FY81		
	Original Programs	Estimate in FY81 Budget Memorandum	Final Outcome	Original Programs	Current Estimate	% Change
Commitments						
- IBRD (\$ millions)	7600	7600	7644	8600	8600	-
- IDA5 (\$ millions)	3500	3400	3838	-	67 ^{a/}	n.a.
IDA6 (SDR millions)				2750 ^{b/}	2750	-
(\$ millions)				3600 ^{b/}	3514 ^{c/}	-2.4
- IFC (\$ millions)	420	420	681	571	750	+31.3
No. of Operations						
- IBRD/IDA	252	247	247	256	256	-
- IFC	51	51	55	58	58	-
Disbursements (\$ millions)						
- IBRD	4300	4500	4363	5200	5200	-
- IDA	1500	1350	1411	1750	1750 ^{d/}	-
- IFC	280	280	312	340	440	+29.4
of which Own Account	185	185	190	230	260	+13.0
IBRD Borrowing Program (\$ millions)						
	5300	5324	5322	6600	6600	-
Net Income (\$ millions)						
- IBRD	471	571	588	554	595	+7.4
- IFC	20.4	20.4	20.7	24.5	27.1	+10.6
Higher Level Staffyears						
- IBRD/IDA	2445	2427	2411	2577 ^{e/}	2537	-1.6
- IFC	196	197	196	213	213	-
Administrative Expenses (\$ millions)						
- IBRD/IDA	333.0	334.0	338.3	402.4 ^{f/}	405.0 ^{g/}	+0.6
- IFC	26.7	26.3 ^{h/}	25.9 ^{h/}	32.5 ^{i/}	32.4 ^{h/}	-0.4

^{a/} Balance of IDA5 resources carried forward into FY81.

^{b/} The originally approved IDA program of \$3,600 million has since been denominated as SDR 2,750 million in accordance with the decision of the Executive Directors to express IDA6 commitments and obligations in SDRs. The conversion to SDRs used exchange rates of October 5, 1979, those used in valuing contributions to IDA6.

^{c/} The estimated current dollar equivalent of the SDR 2,750 million IDA program consisting of the sum of dollar equivalents of SDR 630 million in commitments approved through December 31, 1980 using exchange rates as of the dates of negotiation of each credit (\$822 million) and of the SDR 2,120 million balance of that FY81 program using exchange rates as of January 19, 1981 (\$2,692 million).

^{d/} Includes the dollar equivalent of a small amount of disbursements in SDRs under IDA6 commitments.

^{e/} The initially approved total of 2,561 paid staffyears plus 16 paid staffyears approved for the China work program.

^{f/} The initially approved budget of \$392.1 million plus \$4.1 million approved for the China work program and \$6.2 million approved for the interim salary adjustment.

^{g/} Estimate of current budgetary needs to implement approved FY81 work program based on midyear review of departmental budgets; see paras 32-33.

^{h/} Excludes extraordinary expenses on acquired assets of \$0.6 million in FY80 and an estimated \$0.6 million in FY81.

^{i/} The originally approved budget of \$32.0 plus \$0.5 million approved for the interim salary adjustment.

IBRD/IDA INPUT/OUTPUT DATA AND SELECTED MEASURES OF EFFICIENCY BY FISCAL YEAR

	FY68	FY69	FY70	FY71	FY72	FY73	FY74	FY75	FY76	FY77	FY78	FY79	FY80	FY81 Est.	FY82 Prog.	FY83	Ratio FY82 Over FY68
I. Total IBRD/IDA Administrative Expenses																	
\$m	38.0	45.5	61.3	76.5	95.4	109.4	134.2	157.5	185.1	213.1	240.0	276.7a/	338.3	406.0	474.8	12.49	a/ Excludes the accrual for vacation pay of \$16.8 million charged to FY79 expenses
\$1 m	116.5	129.6	182.6	192.1	228.2	248.2	271.2	282.1	301.7	322.2	339.1	356.7	385.1	406.0	427.6	3.67	
% Increase \$m	8.6%	19.2%	34.7%	24.8%	24.7%	14.6%	22.4%	17.4%	17.5%	15.1%	12.6%	15.3%	22.3%	20.0%	16.7%	-	
% Increase \$1 m	5.0%	11.2%	25.5%	18.1%	17.8%	9.7	9.3%	4.0%	6.9%	6.8%	5.2%	5.2%	8.0%	5.4%	5.3%	-	
II. No. of Staff at End FY b/																	
Higher-Level (HL)	763	957	1174	1352	1521	1657	1754	1883	2040	2182	2269	2352	2444	2644	2781	3.64	b/ Staff on duty year-end through FY80. Excludes non-bursable technical assistance staff from FY76 onwards
Secy., Clerical, Ass't. Level	858	926	1071	1249	1446	1567	1695	1829	1958	2020	2098	2185	2304	2527	2671	3.11	
Total	1621	1883	2245	2601	2967	3224	3449	3703	3998	4202	4367	4537	4748	5171	5452	3.36	
% Increase	5.5%	16.2%	19.2%	15.9%	14.1%	8.7%	7.0%	7.4%	7.8%	5.1%	3.9%	3.9%	4.7%	4.1%	5.4%	-	
III. No. of Paid and Effective HL Staffyears d/																	
Effective HL Staffyears																	
Country Economic and Sector Work						190	202	203	229	233	243	253	270	284	-	-	
Lending						478	521	567	506	481	723	731	760	779	-	-	
Supervision						161	210	258	310	314	369	391	424	437	-	-	d/ A paid staff-year is a multiple of 52 weeks of 40 hours each
Other e/						162	151	153	165	179	184	183	196	217	-	-	
Total Effective Staffyears						952	1065	1181	1290	1407	1519	1597	1690	1791	-	-	
Admin. & OI in Operating Depts.						405	434	461	498	518	508	594	591	624	-	-	e/ Increase over authorized positions in previous years
Total Operating Paid HL Staffyears	392	506	652	769	862	967	1068	1162	1245	1394	1492	1565	1621	1684	1801f/	4.59	
Total Support Paid HL Staffyears	349	398	457	507	589	656	675	712	741	756	790	790	823	811g/	2.62		
Total Bank Paid HL Staffyears - Numbers	741	904	1109	1276	1451	1624	1743	1874	1986	2150	2282	2355	2444	2495	2612	3.06	
% Increase	5.4%	22.0%	22.7%	15.1%	13.7%	10.3%	7.7%	6.6%	6.7%	6.9%	4.4%	4.1%	3.9%	2.5%	8.3%	-	
IV. Lending																	
IBRD - Loans (\$b)	0.8	1.4	1.6	1.9	2.0	2.1	3.2	4.3	5.0	5.8	6.1	7.0	7.6	8.6	9.6	12.00	
No. Projects Approved	44	82	69	78	72	73	105	122	141	161	137	142	144	141	162	3.68	
Avg. Amount (\$m)	19.3	17.1	22.9	24.6	27.3	28.1	30.7	35.4	35.3	35.8	44.5	49.2	53.1	61.0	59.3	3.07	
Avg. Amount (\$1m)	88.9	67.9	79.7	75.0	72.6	65.5	63.2	64.8	56.8	50.5	56.5	57.1	57.3	61.0	59.3	0.68	
IDA - Credits (\$b) h/	0.1	0.4	0.6	0.6	1.0	1.4	1.4	1.6	1.7	1.3	2.3	3.0	3.8	5.5	4.1	41.00	
No. Projects Approved	16	29	50	51	68	75	69	68	73	87	99	105	103	107	108	6.63	
Avg. Amount (\$m)	6.7	13.3	12.1	11.5	14.7	18.1	15.9	23.2	23.7	19.5	23.4	28.0	37.3	32.9	36.7	5.78	
Avg. Amount (\$1m)	30.2	52.8	42.1	35.1	39.1	42.2	32.8	42.5	36.5	27.5	29.7	33.4	37.3	37.9	38.7	1.26	
Commitment Deflator i/	22.2	25.2	28.7	32.8	37.6	42.8	48.6	54.7	62.2	70.7	78.6	86.0	93.0	100.0	100.0	-	
Total No. Projects Approved	60	111	119	129	140	148	174	190	214	228	226	247	247	248	268	4.47	
Pipeline Increase (equiv. Project)									na	+4	+28	+30	+14	+32	+20	-	
Total Equiv. Proj. Processed									226	229	257	277	261	280	288	-	
End Year Pipelines									258	272	300	330	344	376	396	-	
Equivalent Projects									184	161	195	195	202	232	236	-	
Projects Passed Appraisal Depture									81%	60%	79%	79%	81%	81%	87%	-	
% of Next Year's Program																	
% Completion of Future FY's Lending Programs																	
Year 1									62%	60%	62%	63%	68%	72%	73%	-	
Year 2									22%	24%	29%	29%	37%	35%	35%	-	
Year 3									12%	19%	14%	13%	15%	14%	13%	-	
Year 4									6%	8%	7%	6%	9%	9%	10%	-	
Avg. SW per Project Approved (Incl. Dropped Proj.)									125	128	133	127	131	139	139	-	
Avg. SW per "Standard" Project j/									126	130	134	129	130	142	138	-	
V. Supervision/PCKs																	
No. of Projects under Supervision k/									1103	1233	1358	1498	1595	1695	1770	-	
Avg. Supervision SW per "Standard" Project l/									11.7	12.3	11.0	11.2	11.3	12.2	11.6	-	
No. of PCKs completed									96	79	87	118	94	125	150	-	
Avg. PCK SW per PCK Completed m/									11.4	14.5	13.7	13.2	10.4	10.0	10.0	-	
VI. No. of Formal Economic Reports Completed																	
Basic									6	5	7	4	1	2	2	-	
Other									72	53	46	68	77	58	58	-	
VII. No. of CFTs completed																	
									46	42	33	32	29	35	36	-	
VIII. No. of Formal Sector Reports Completed																	
									47	58	64	80	78	64	79	-	
IX. Other Direct Output - Operating Depts. FY																	
Technical Assistance									19	15	14	17	20	26	25	-	
Aid Coordination									6	11	11	13	15	12	14	-	
Advisory									23	26	33	34	41	38	60	-	
Policy									23	25	41	45	43	46	51	-	
Research									25	28	28	21	19	22	20	-	
Other									55	60	52	54	45	48	47	-	
Total									154	165	179	184	163	212	217	-	
X. Program Costs as % of Total																	
Country Economic & Sector Work									18	12	11	11	10	10	11	-	
Lending									31	29	29	30	28	31	29	-	
Supervision									11	10	12	14	15	16	17	-	
Research									3	5	5	5	4	4	3	-	
Operational Review and Policy Work									4	5	5	5	6	6	6	-	
All Other									39	39	38	35	37	34	34	-	
XI. M. Support FY as % of Total HL FY	48	46	44	41	41	40	38	37	36	35	33	33	33	34	34	0.71	
XII. Expenses per HL FY (in FY81 \$000) n/																	
HL Salaries of Total Personnel Services o/	105.0	93.6	81.7	94.1	93.3	93.1	99.2	100.9	107.7	102.0	102.6	104.0	107.2	108.4	107.0	1.02	
Operational Travel	16.5	15.3	17.2	17.7	17.7	17.3	17.2	16.4	16.5	16.8	16.6	15.9	17.2	18.0	17.4	1.05	
Overhead p/																	
Communications	2.2	2.1	1.9	2.0	1.9	1.7	2.0	1.7	1.5	1.5	2.0	1.9	2.1	2.4	2.2	1.00	
Office Occupancy	9.4	8.4	10.4	10.3	9.7	8.9	9.0	8.2	7.2	7.0	7.3	7.2	7.3	7.3	7.7	0.80	
Benefit Travel	5.8	6.8	6.4	6.4	6.5	7.3	6.4	7.3	7.0	6.1	5.3	5.2	6.2	6.6	6.8	1.10	
Other Overhead	5.1	5.3	5.6	6.1	5.3	5.3	4.8	4.4	4.8	5.1	5.2	5.3	5.8	5.8	6.9	0.98	
Total	32.7	32.6	34.5	35.2	33.4	33.4	32.2	31.6	30.8	30.7	31.9	31.8	31.5	31.7	31.2	0.94	
Computing	3.9	4.4	4.4	4.5	5.9	5.8	6.1	6.0	5.5	5.5	5.5	6.0	4.5	4.1	4.1	1.03	
All Operating Unit																	

Attachment IV

Annex Table 22

WORLD BANK GROUP: OVERHEAD AND SUPPORT COSTS PER OPERATING FULL-TIME STAFFYEAR ^{a/}

	FY68	FY69	FY70	FY71	FY72	FY73	FY74	FY75	FY76	FY77	FY78	FY79	FY80 Est.	FY81 Prop.	% Change from FY68
Costs in FY80 \$000/Staffyear															
Executive Offices	3.2	2.3	2.0	1.7	1.3	1.0	0.9	0.6	0.3	0.3	0.3	0.3	0.3	0.3	-91%
Secretary's	3.6	2.9	2.7	2.5	2.2	2.0	1.8	1.7	1.6	1.6	1.5	1.4	1.4	1.3	-64%
Administrative Services															
Office Occupancy ^{b/}	25.5	23.4	24.3	22.3	21.5	18.6	19.3	18.8	17.3	16.1	16.0	15.6	16.0	15.9	-38%
Office Equipment & Supplies	2.0	1.5	1.8	1.8	1.4	1.3	1.2	1.1	1.1	1.0	0.8	0.8	0.8	0.8	-60%
Communications ^{c/}	13.3	11.1	10.0	9.9	9.4	9.3	9.4	6.9	6.5	6.2	6.5	6.4	6.2	6.3	-53%
Printing & Graphics)					5.7	4.4	4.0	3.9	3.8	3.4	3.4	3.0	3.0	2.9)
Cartography)	6.4	5.6	5.4	5.6) -45%
Language Services)	2.8	2.2	2.0	2.4	2.7	2.8	2.9	2.9	2.8	2.7	2.6	2.5	2.5	2.5) -11%
Records Management	2.0	1.6	1.4	1.4	1.5	1.5	1.4	1.3	1.2	1.3	1.3	1.2	1.2	1.2	-40%
Library & Periodicals	2.2	1.9	1.4	1.4	1.3	1.2	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	-64%
Travel & Shipping Admin.	1.7	1.2	0.9	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-71%
Sub-Total, Admin. Serv. ^{d/}	<u>53.8</u>	<u>46.8</u>	<u>45.3</u>	<u>43.9</u>	<u>42.5</u>	<u>38.6</u>	<u>38.9</u>	<u>35.8</u>	<u>33.6</u>	<u>31.6</u>	<u>31.6</u>	<u>30.5</u>	<u>30.8</u>	<u>30.7</u>	-43%
Organization Planning	0.9	0.7	0.6	0.7	1.5	1.9	1.8	1.6	1.7	1.6	1.4	1.3	1.4	1.6	+76%
of which:															
Word-Processing Services	(0.9)	(0.7)	(0.6)	(0.7)	(0.9)	(1.1)	(1.1)	(1.0)	(1.1)	(1.1)	(0.9)	(1.0)	(1.1)	(1.2)	+33%
Compensation ^{e/})												1.4	1.4	1.4)
Personnel Management ^{f/})	5.5	5.7	6.4	7.4	8.5	7.6	6.4	6.2	6.4	6.0	6.1	4.5	4.7	4.8) +13%
Computing ^{g/} ^{h/}	3.6	4.0	4.0	4.1	5.4	5.3	5.6	5.5	5.0	5.0	5.0	5.5	5.5	5.2	+44%
TOTAL	<u>68.6</u>	<u>60.6</u>	<u>58.9</u>	<u>58.4</u>	<u>59.2</u>	<u>55.0</u>	<u>53.8</u>	<u>50.1</u>	<u>47.5</u>	<u>44.8</u>	<u>44.8</u>	<u>43.9</u>	<u>44.5</u>	<u>44.3</u>	-35%

^{a/} Excludes higher-level consultant staffyears.^{b/} In order to fully represent office occupancy cost, an opportunity cost of owned space has been included.^{c/} Net of reimbursements from the IMF for cost-shared activities.^{d/} Components do not sum because overhead expenses for office occupancy, office equipment and supplies, and communications show up in more than one category.^{e/} Includes costs of compensation studies.^{f/} Includes all computing bankwide.

E. PENSION

717/4/26

E. PENSION

The Staff Retirement Plan

1. The SRP provides pension, surviving spouse and disability benefits to Bank Group staff. The basic pension formula is 2% of the highest three-year average pensionable remuneration for each year of service. Pensioners can elect a currency other than the U.S. dollar (approximately 12% have), if they submit proof that they will reside in the country concerned. All pensions are indexed against inflation in the currency in which they are paid.

2. Pensionable remuneration is the gross equivalent of net salary, calculated according to a formula developed by the United Nations based on average national income taxes, but weighted heavily towards the U.S. tax system. In most cases, the pension base produces higher gross salaries than the salaries produced under the Bank's new "average deductions" tax reimbursement system.

3. The SRP is not integrated with U.S. Social Security. U.S. staff are required to pay Social Security and are entitled to all Social Security benefits. Non-U.S. staff do not pay Social Security taxes or receive Social Security benefits.

4. The staff contribute 7% of their pensionable remuneration to the SRP. The Bank's contribution rate is determined each year by the

Plan's actuary. The Bank's contribution for FY81 was 18.2% of pensionable remuneration (about 29% of net salaries).

5. The Plan's assets presently amount to \$500 million and are expected to grow to \$1 billion by 1985. The present target portfolio distribution is as follows: 52% U.S. common stocks, 20% U.S. fixed income investments, 20% investments outside the U.S., usually equity, and 8% real estate. About 3% of the U.S. common stock assets are targetted for venture capital and special situations. In recent years, the Plan's total returns have been consistently above the A.G. Becker median returns for institutional portfolios.

Issues

6. As with all sponsors of defined benefit pension plans, the Bank faces the long-term problem of financing open-ended, inflation-indexed liabilities in a period of high inflation and volatile exchange rates. The problem is more serious in the Bank's case because the Plan has a currency option and pensions are also indexed against inflation. Most pension plans are affected only by inflationary salary increases.

7. Two more immediate issues face the Plan: (i) the pension base must be reviewed to determine if it is still representative of an appropriate basket of national tax systems, and whether it should be brought in line with the tax reimbursement system for U.S. nationals;

and (ii) consideration must be given to what, if anything, can be done for staff members whose beginning pension entitlements in their home currency have been eroded because their home currency has appreciated strongly against the dollar over the past several years. Both these issues as well as several minor ones are to be addressed in an upcoming review of the SRP.

Reference Document

E.1.01 Annual Report on Staff Retirement Plan

717/4/25

Thirtieth Annual Report

Staff Retirement Plan

June 30, 1980



World Bank

THE WORLD BANK

STAFF RETIREMENT PLAN

THIRTIETH ANNUAL REPORT

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REPORT TO PARTICIPANTS
OF THE
STAFF RETIREMENT PLAN
FROM THE
PLAN ADMINISTRATOR
ON THE
OPERATIONS
OF THE
PLAN FOR 1979

Section 1: Highlights of Report

1. This report describes the administration and finances of the Staff Retirement Plan (SRP) for the year ending December 31, 1979.
2. The Plan experienced good investment results in 1979. The rate of return on the total portfolio was 14.4%. The rate of return on the total portfolio and the rates of return on each segment of the portfolio again exceeded the rates of return of appropriate market indices and most other institutionally managed portfolios. As part of its long-term strategy, the Pension Finance Committee (PFC) increased the portion of the Plan's assets allocated for nondollar investments and real estate and made changes in the management structure of the U.S. common stock and U.S. fixed income segments of the portfolio.
3. The 1979 investment returns were sufficient to offset increases in the Plan's liabilities caused by salary and pension increases granted during the year. As a result, the Plan showed an experience gain for the year, the first since 1975. The emphasis on equity investments and the changes we introduced over the past two years in our management structure have contributed to these encouraging results. We are pleased with these results but participants should be aware that the economic outlook remains extremely uncertain and that as in the past we should expect to suffer temporary reversals. In the long term, however, we are hopeful that our investment strategy and management structure will lead to superior performance.
4. During the year, the PFC, acting on the advice of the Plan's Consulting Actuaries, changed the assumptions used in the Plan's annual valuations to bring them more in line with recent experience. The Actuaries advised also that the Bank change the method for calculating its contribution to the Plan. The change was endorsed by the PFC, Bank Management, and the Staff Association, and approved by the Executive Directors. Under the old method, contributions took two forms, a regular contribution of 21% of pensionable remuneration, shared in a 2-1 ratio by the Bank and staff, and a separate payment, paid by the Bank alone, to amortize the liabilities not covered by the regular contribution. Under the new method, all liabilities will continue to be funded and the staff contribution will continue at 7% of pensionable remuneration. The Bank

contribution, will change each year depending on experience during the previous year and will be expressed in terms of a single percentage of pensionable remuneration, calculated so that the value of the Bank contributions will balance the Plan's assets and liabilities. The new method will produce less volatile and more predictable Bank contributions, and give a clearer picture of the true cost of the Plan to the Bank and of its value to the participants. The Bank's contribution under the new method for its next fiscal year will be 18.20% of pensionable remuneration.

5. Section 2 gives a general explanation of the Plan's benefits, funding arrangements, investment policy and management structure. The remainder of the report gives further details on the above developments, as well as summary statistical information on Plan participation, the results of the actuarial valuation, financial statements, and investment data, as of December 31, 1979.

Section 2: Information on Plan Benefits, Funding, Investments, and Management

Plan Benefits

6. After salaries, the Staff Retirement Plan is the most important part of our compensation package. The Plan provides a pension when we retire or in the event we become disabled. The Plan also provides protection to our families in the event of our death. For those of us who leave the Bank before acquiring the right to a pension, the Plan serves the dual purpose of insuring us against death and disability during our employment and providing a withdrawal benefit when we leave.

7. Yearly, each participant in the Plan receives a "Statement of Personal Benefits," giving an individual statement of benefit entitlements under the Plan and other coverages provided by the Bank. The full text of the Plan is distributed to each staff member from time to time. The Personnel Manual (Statement 3.26) contains a simplified summary of the Plan's benefits and examples of how different elements are calculated. Participants are urged to review all these documents particularly the Statement of Personal Benefits and Personnel Manual Statement 3.26, in order to become more familiar with their benefits under the Plan. Any questions, comments or suggestions on any of the Plan documents should be referred to the Staff Retirement Plan Office.

Funding Arrangements

8. The Plan benefits are paid from the Retirement Fund, which is financed by contributions from participants and the Bank. Participants pay 7 percent of their pensionable remuneration as their current regular contribution. The Bank is responsible for all other costs that are

required to keep the accumulation of assets on schedule. From 1976-79, the Bank's total contribution ranged between 17.9% and 18.9% of pensionable remuneration; for 1980, the Bank will contribute about 18.2% of pensionable remuneration. Benefit payments are small in relation to contributions because the Bank is a relatively young organization, i.e., there are relatively few pensioners in relation to staff in active service and average annual pension payments are relatively small, but payments will grow rapidly as more participants retire.

9. Because payments are small in relation to contributions, the Retirement Fund is growing rapidly. At the end of 1979, the market value of the Fund was \$348 million. It has tripled in the past five years and is expected to more than double in each of the next two five-year periods. At some point in the future, benefit payments will approach the level of contributions. Thereafter, income from the investment of the Fund's assets, and eventually the assets themselves, may have to be drawn upon to pay benefits.

Actuarial Valuation

10. Each year the Plan's financial condition is reviewed by the Plan's Actuaries through a process called the actuarial valuation. The valuation involves the preparation of long-range projections of contribution and benefit flows for each participant in the Plan, which are then discounted back to the valuation date to obtain their present value. On the actuarial balance sheet, the present value of the contribution flows appear as assets and the present value of the benefit flows appear as liabilities. The Actuaries use two types of assumptions in making these projections: non-economic assumptions, a set of rates specifying the probability of different events, such as death, disability, retirement, and withdrawal, occurring in each year of a participant's lifetime; and economic assumptions, the assumed rates of salary and pension increase and investment return. The Actuaries measure the experience under each assumption during the valuation year to see if there has been a gain or loss, that is they ascertain whether the amounts of the various benefits actually paid have been more or less than expected, whether salaries have risen more or less than expected and whether the investment return has been more or less than expected. If the Plan's net experience under the package of assumptions has been favorable during the year there is an experience gain; and the Bank's contribution rate during the next year goes down; if the reverse occurs, there is an experience loss and the Bank's contribution rate during the next year will increase.

Investment Policy

11. The Pension Finance Committee has adopted an investment policy for the Plan that emphasizes (i) equity-type investments such as common stocks and real estate and (ii) diversification among a wide variety of investments. The equity policy was adopted because the return on the

Plan's assets needs to be sufficient in the long term to offset any increases in liabilities caused by higher-than-assumed salary and pension increases granted to offset the effects of inflation. Historical experience has shown that in spite of temporary setbacks and even periods of negative returns, equity-oriented portfolios have withstood better the effects of inflation and provided higher long-term returns than bond-oriented portfolios, the other broad portfolio strategy open to the Plan. The diversification policy was adopted to reduce the impact on the total portfolio of a loss on any one investment and to provide higher long-term returns. Historical experience has shown that widely-diversified portfolios, although they do not achieve the best return in any one period, achieve high returns in the long term and achieve the highest returns for the degree of risk assumed. At present, the Plan's target asset mix is 52% U.S. common stocks, 20% non-U.S. investments, 20% U.S. fixed income investments and 8% real estate. Within each portfolio segment specific investment strategies have been developed. Further details on these strategies are contained in Section 5.

12. Because the Plan follows a highly diversified investment policy, the Plan's returns should not be compared to the returns of investment pools that follow specific, concentrated strategies such as money market funds and mutual funds that invest solely in U. S. common stocks, nor to the returns offered by savings institutions and credit unions. The most meaningful comparison of the Plan's returns is with the returns of other pension portfolios that follow similar investment strategies as is done in Appendix D.

Plan Management

13. Responsibility for the Plan is vested in two Committees, the Pension Benefits Administration Committee (PBAC) and the Pension Finance Committee (PFC), and a Staff Retirement Plan Administrator. The Compensation Department and the Staff Association also have active roles in the Plan.

14. The PBAC is responsible for administering all benefits of the Plan and resolving any questions that arise as to interpretation of the related provisions of the Plan. The PBAC has nine members; the Chairman; two Executive Directors; two nominees of the Staff Association; the Chairman of the PFC, who is an ex-officio member; and three other members who may, but need not be, staff members.

15. The PFC is responsible for all financial aspects of the Plan, including the soundness of the funding arrangements and the investment of the Retirement Fund. The PFC has eleven members: the Chairman; two Executive Directors; two nominees of the Staff Association; two outside experts in finance, investments and pension funding; the Chairman of the PBAC, who is an ex-officio member; and three other members who may, but need not be, staff members.

16. The Staff Retirement Plan Administrator serves as Secretary to both Committees and as head of the Staff Retirement Plan Office which is attached to the Office of the Vice-President, Finance. The SRP Office has two units, the Pension Administration Unit, which deals with all administrative aspects, including answering participants' questions on Plan benefits and processing benefit payments, and the Pension Investment Unit, which deals with the investment of the retirement fund.

17. The Compensation Department keeps the Plan benefits under review to assure that they are adequate to meet participants' needs in light of the Bank's total compensation policies and prevailing practices in other organizations.

18. The Staff Association nominates two members each to the PBAC and the PFC. The Staff Association also has a separate working group to identify and study issues of importance to the staff on the SRP.

19. The memberships of the PBAC and the PFC are contained in Appendix F.

Section 3: Financial Summary

Contributions and Benefit Payments

20. During 1979, the Bank paid \$40 million into the Retirement Fund and the staff paid \$14.3 million. Pension and lump sum death benefit payments during the year amounted to \$6.3 million. An additional \$2.2 million was paid out in lump sum withdrawal benefits. Lump sum payments upon commutation of pensions amounted to \$0.2 million. The Plan continues to have a strong cash flow, with regular contributions running at about six times current benefit payments.

Asset Values

21. The value of the assets in the Retirement Fund is normally measured by three methods: book value, market value, and adjusted value. The book value represents the actual cost of investments, adjusted in the case of bonds for any unamortized premium or accumulated discount. The market value reflects currently quoted stock and bond prices. The adjusted value is used for the purpose of actuarial valuations. Because actual investment returns fluctuate substantially from year to year, the Actuaries normally "smooth" the results when calculating experience gains or losses. This process is referred to as the asset valuation method. In order to reduce the investment return fluctuations further, the PFC, acting upon the advice of the Actuaries, adopted a new asset valuation method under which the adjusted value of the assets is based on their average market value over the previous five years, adjusted for contributions and income coming into the Retirement Fund. The old method was to value fixed income

investments to yield 6 percent to maturity and equity investments at the lower of 90 percent of market value or the three-year average market price. The table below shows the book value, market value and adjusted value of the Plan's assets over the past five years. For 1975-78, the adjusted value is shown under the old asset valuation method; for 1979, under the new method. The old method would have produced a value of \$351.9 million for 1979.

	Assets (US\$ million)				
	1975	1976	1977	1978	1979
Book Value	131.7	166.4	203.7	253.6	337.0
Market Value	133.7	186.4	210.4	261.2	348.0
Adjusted Value	137.2	174.7	207.1	252.2	328.6

Section 4: Results of Actuarial Valuation, and Changes in Actuarial Assumptions and Funding Method

Actuarial Valuation

22. The results of the actuarial valuation as of December 31, 1979 are juxtaposed below with those as of December 31, 1978. Further details on the valuation can be found in Appendix E.

	(US\$ million)	
	<u>12/31/78</u>	<u>12/31/79</u>
<u>Assets</u>		
Value of present assets	252.2	328.6
Present value of future regular contributions by the participants and by the Bank	490.1	507.0
Present value of additional payments by the Bank towards unfunded liability	<u>115.2</u>	<u>105.9</u>
Total Assets	<u>857.5</u>	<u>941.5</u>
<u>Liabilities</u>		
Present value of liabilities in respect of present participants	778.3	835.8
Present value of liabilities in respect of retired participants and beneficiaries of retired participants	<u>79.2</u>	<u>105.7</u>
Total Liabilities	<u>857.5</u>	<u>941.5</u>

23. The decrease in the unfunded liability (from \$115.2 million to \$105.9 million) results from a net experience gain of \$4.9 million (see Appendix E), and a net decrease of \$4.4 million because of changes in the actuarial assumptions.

24. The valuation disclosed also that the termination liability of the Plan is \$263 million, well below the \$348 million year-end market value of the Plan's assets. The termination liability is being used by a growing number of pension plan sponsors as a measure of the financial condition of their plans. It represents the liability, determined under the current actuarial assumptions, in respect of benefit rights acquired up to the valuation date assuming termination of the Plan as of that date.

Changes in Actuarial Assumptions

25. On the advice of the Plan's Actuaries, the PFC made certain changes in the actuarial assumptions used in the Plan's annual valuation. As discussed previously in paragraph 21, the five-year moving market average method was adopted for valuing the Plan's assets. The economic assumptions were changed to reflect more accurately current inflation expectations: the rate of annual increase in pensionable remuneration, actually a graduated set of rates based on age, was increased from about 5% on average to about 9% on average; the rate of annual pension increases was increased from 2% to 6%; and the rate of return on investments was increased from 6% to 10%. These changes reflect an increase in the assumed rate of inflation from 2% to 6% in all the economic assumptions. Also, changes were made in the non-economic assumptions, that is the set of rates specifying the probability of different events, such as death, disability, retirement and withdrawal occurring in each year of a participant's lifetime, to bring the rates in line with the Plan's recent experience.

Change in Funding Method

26. Under the provisions of the Staff Retirement Plan, the Bank is responsible for all costs in excess of the staff contributions. Since 1975, the Plan has received contributions in two forms: a regular contribution of 21% of pensionable remuneration, shared in a 2-1 ratio by the Bank and staff, and a separate payment, paid by the Bank alone, to amortize over periods up to 40 years those projected liabilities, which were referred to as "unfunded liabilities," that were not covered by the regular contribution rate. The PFC has felt for some time that the use of the term "unfunded liabilities" for certain of the Plan's projected costs gives a misleading impression of the Plan's financial condition, particularly as the condition is quite sound when measured by the more meaningful standard of the spread between the market value of the Plan's assets and the termination liability (see para. 24). Last year, the PFC asked the Actuaries to review the merits of alternative funding arrangements. The Actuaries recommended that the SRP convert to a funding method under which all contributions required to balance the Plan's assets and liabilities are expressed in terms of a single percentage of pensionable remuneration, with 7% paid by the staff and the remainder by the Bank. This so-called aggregate rate funding method is now used by many of the major U.S.

corporate sponsors of pension plans. The proposed change was endorsed by the PFC, Bank Management, and the Staff Association, and approved by the Executive Directors. The new funding method will start on July 1, 1980 in conjunction with the start of the Bank's fiscal year. The Bank will contribute 18.2% of pensionable remuneration for the year; the staff will continue to contribute 7%. Each year thereafter the Bank's contribution rate will change depending on the results of the previous year's actuarial valuation. Details on the computational differences between the present method and the aggregate rate method are contained in Appendix E.

Section 5: Investment Results

27. The rate of return on the Plan's assets measured in terms of market value was a positive 14.4 percent as against returns of positive 7.0 percent for 1978 and minus 3.6 percent for 1977. Rates of return on the Plan's investments are not measured against an absolute standard but, for each segment of the portfolio, against appropriate indices of overall market performance and against the returns achieved by other large institutional portfolios. The results of these comparisons over the past 10 years are shown in Appendix D.

28. The Plan's assets are invested utilizing the services of professional management firms in accordance with guidelines and objectives established by the PFC. The assets are divided into four categories, U.S. common stocks, U.S. fixed income investments, nondollar investments and real estate. During 1979, the PFC channeled most of the Plan's net contributions into nondollar investments and real estate. The target allocation and the actual allocations as of December 31, 1978 and December 31, 1979 are set out in the table below:

<u>Asset Category</u>	<u>Target Allocation (%)</u>	<u>Dec. 31. 1978</u>		<u>Dec. 31, 1979</u>	
		<u>Actual Allocation</u>	<u>Actual Allocation</u>	<u>Actual Allocation</u>	<u>Actual Allocation</u>
		<u>\$ (million)</u>	<u>%</u>	<u>\$ (million)</u>	<u>%</u>
U.S. Common Stocks	52	164.0	63	207.7	60
U. S. Fixed Income	20	62.4	24	64.2	18
Non Dollar Investments	20	23.5	9	56.0	16
Real Estate	8	11.3	4	20.1	6
Total	100	261.2	100	348.0	100

The emphasis on equity investments inside and outside the United States was a major contributor to the Plan's favorable investment returns in 1979.

29. The U.S. common stock (USCS) assets are divided into passive and active segments. The passive portion currently amounts to about 45 percent of total USCS assets (50 percent as of year-end 1978). It is invested in an index fund managed by Wells Fargo Bank of San Francisco, California. An index fund is a pool of stocks having the objective of duplicating the returns earned by a market index, in this case the Standard & Poor's Index of 500 stocks, the most widely accepted measure of stock price movements in the U.S. The objective of the passive segment is to ensure that at least that portion of the total USCS portfolio comes close to matching the return on the S&P 500. For most past periods, the S&P 500 has exceeded the returns of the majority of institutionally managed stock portfolios. The passive segment also forms a low-cost, broadly-diversified and efficiently-managed base for the total USCS portfolio and allows the active managers to assume higher levels of risk in the pursuit of exceptional investment returns by concentrating their holdings in those companies and market sectors in which they have a particular expertise or in which they perceive exceptional opportunities.

30. At the beginning of 1979, the active portion was managed by two firms, J. W. Redmond & Co. of Washington, D.C. (JWR) and Torray, Clark & Co., Inc. (TCC) of Chevy Chase, Maryland. In April of 1979, after an extensive analysis of the different investment strategies and a survey of investment managers, the PFC decided to transfer the USCS assets managed by JWR to three new managers: Brokaw Capital Management, Inc. (BCM) of New York, New York; Grantham, Mayo & Van Otterloo, Inc. (GMV) of Boston, Massachusetts; and Wilmington Capital Management Inc. (WCM) of Wilmington, Delaware. BCM and GMV were retained to apply a rotational or opportunistic investment strategy, that is a strategy calling for aggressive sectoral moves in response to the manager's perception of market conditions. WCM was hired to complement TCC in scanning the universe of small and large capitalization stocks using a strong fundamental value orientation. Each of the four active USCS managers manages about 14 percent of USCS assets.

31. Since 1976, the U.S. fixed income (USFI) assets have been split between two managers, J.W. Redmond & Co. (JWR) of Washington, D.C. and Fischer, Francis, Trees & Watts, Inc. (FFTW) of New York, New York. During 1979, the PFC reviewed the USFI segment, and to improve the segment's diversification, decided to split it into three sub-segments: (i) an actively managed portfolio of high-grade corporate and government bonds, referred to as the high-quality segment; (ii) an actively managed portfolio of higher-yielding, publicly-traded, but less liquid investments, including discount bonds, convertibles, preferred and utility stocks, and covered call options, referred to as the high-yield segment; and (iii) a portfolio of higher-yielding, non-publicly traded investments, including mortgages, euro-dollar and US corporate bonds, referred to as the private placement segment. JWR and FFTW will continue to manage the high-quality segment, each using a different investment strategy. The PFC selected

Morgan Guaranty Trust Co. of New York, New York to manage the private placement segment and First Investors of New York, New York and AIM Advisors of Houston, Texas to manage the high-yield segment.

32. At the beginning of 1979, the nondollar assets were managed by Fiduciary Trust Company of New York, New York. During 1979, the PFC decided to transfer the assets managed by Fiduciary Trust to Morgan Guaranty Trust Co. of London, England, Rotrusco B.V., a subsidiary of Robeco of Rotterdam, the Netherlands, and a nondollar index fund managed by State Street Bank and Trust Company of Boston, Massachusetts. Each of the new managers has about one-third of the total nondollar assets. The nondollar index fund is designed to track the performance of the Capital International Index, an index of common stock performance in Europe, Australia and the Far East. As with the USCS index fund, the nondollar index fund forms a low-cost, broadly-diversified, and efficiently-managed base for the total nondollar portfolio and allows the active nondollar managers to concentrate their assets in the countries and sectors of the market they feel will achieve the best returns.

33. The real estate segment is presently invested in four real estate equity funds managed by Corporate Property Investors, Inc. of New York, New York, the Equitable Life Assurance Society of New York, New York, the Prudential Life Insurance Company of Newark, New Jersey, and Wells Fargo Bank of San Francisco, California. The Wells Fargo fund was added during 1979. The PFC intends to investigate the merits of real estate investments outside the U. S. during 1980.



Bernard Holland
Staff Retirement Plan Administrator

Attachments:

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENTStaff Retirement PlanSummary of Relevant Statisticson Plan Participation

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Number of Participants (as of December 31)	4,440	4,769	4,843	5,011	5,283
Enrollment During the Year	601	603	510	502	572
Terminations During the Year by:					
Withdrawals	190	190	233	217	196
Transfers from the Bank Group	10	9	5	11	4
Death	6	2	14	8	7
Normal Retirement	17	20	29	25	30
Early Retirement, Immediate Pension	15	15	21	31	16
Early Retirement, Deferred Pension	11	38	127	40	41
Disability Retirement	-	-	7	2	6
Number of Retired Participants and Beneficiaries (as of December 31)	464	530	722	811	882
In Receipt of Benefits	387	423	508	575	646
Not Yet in Receipt of Benefits	77	107	214	236	236

Pension Investment Unit
May 1980

March 28, 1980

To: Pension Finance Committee,
Pension Benefits Administration Committee

From: Masaya Hattori, Controller

Submitted herewith are the December 31, 1979 and 1978 Statement of Changes in Fund Balance, Composition of Fund Balance and Statement of Investments of the Staff Retirement Plan Fund of the Bank. The statements are submitted pursuant to Section 8.7 of the Staff Retirement Plan.

REPORT OF INDEPENDENT ACCOUNTANTS

1801 K Street, N.W.
Washington, D.C. 20006
March 28, 1980

To the Pension Finance Committee
Staff Retirement Plan of the
International Bank for
Reconstruction and Development

In our opinion, the accompanying Statement of Changes in Fund Balance, Composition of Fund Balance and Statement of Investments present fairly the financial position of the Staff Retirement Plan Fund of the International Bank for Reconstruction and Development at December 31, 1979 and 1978, and the changes in the fund balance for the years then ended, in accordance with the provisions of the Staff Retirement Plan and in conformity with generally accepted accounting principles consistently applied. Our examinations of these statements were made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

Pricewaterhouse Co

International Bank for Reconstruction and Development

Staff Retirement Plan

Statement of Changes in Fund Balance

	<u>Year ended December 31</u>	
	<u>1979</u>	<u>1978</u>
Fund Balance at beginning of year	\$253,638,475	\$203,740,329
<u>Contributions:</u>		
Contributions by Bank and IFC (Note 1)	\$ 28,635,873	\$ 24,503,251
Contributions by participants	14,343,857	12,278,526
Payments for unfunded liability (Note 2)	11,335,380	4,374,859
Net receipts from staff retirement plans of other international organizations on behalf of transferred participants	880,809	334,071
	<u>\$ 55,195,919</u>	<u>\$ 41,490,707</u>
<u>Benefit Payments:</u>		
Contributions, withdrawal benefits and interest paid to former participants on withdrawal	\$ (2,212,230)	\$ (1,598,823)
Pension and other benefit payments	(6,340,058)	(5,010,355)
Commutation payments	(210,902)	(460,877)
	<u>\$ (8,763,190)</u>	<u>\$ (7,070,055)</u>
<u>Investment Activity:</u>		
Income from investments	\$ 20,508,903	\$ 14,426,370
Net gain (loss) on sales of investments	16,401,898	1,051,124
	<u>\$ 36,910,801</u>	<u>\$ 15,477,494</u>
Fund Balance at end of year	<u>\$336,982,005</u>	<u>\$253,638,475</u>

Composition of Fund Balance

	<u>December 31</u>	
	<u>1979</u>	<u>1978</u>
Cash	\$ 3,507,442	\$ 71,756
Investments - at cost (see accompanying Statement of Investments)	334,786,636	252,902,262
Accrued income on investments	1,735,851	1,317,368
Accounts receivable (principally due from brokers)	368,307	472,459
	<u>\$340,398,236</u>	<u>\$254,763,845</u>
Less: Accounts payable (principally due to brokers)	3,416,231	1,125,370
	<u>\$336,982,005</u>	<u>\$253,638,475</u>

International Bank for Reconstruction and Development

Staff Retirement Plan

Statement of Investments

December 31

	1979		1978	
	<u>Book Value</u>	<u>Market Value</u>	<u>Book Value</u>	<u>Market Value</u>
Obligations of U.S. Government and its instrumentalities	\$ 19,975,220	\$ 20,061,990	\$ 14,053,250	\$ 13,845,484
Non-U.S. Government obligations	2,949,324	2,793,034	-	-
Corporate and convertible bonds	30,453,318	28,117,884	25,808,265	25,536,247
Short-term investments	47,861,166	47,861,169	43,480,512	43,495,181
Common stocks	215,624,873	227,419,708	159,027,461	165,942,586
Preferred stocks	548,900	562,500	-	-
Real estate investment funds	17,373,835	19,002,489	10,532,774	11,699,184
Totals	<u>\$334,786,636</u>	<u>\$345,818,774</u>	<u>\$252,902,262</u>	<u>\$260,518,682</u>

International Bank for Reconstruction and Development

Staff Retirement Plan

Notes to Financial Statements

December 31, 1979 and 1978

Note 1 - Operations and Basis of Accounting

The Staff Retirement Plan is for the benefit of the employees of the International Bank for Reconstruction and Development (the Bank) and the International Finance Corporation (the IFC). Every participant contributes a percentage of his remuneration to the Fund. The Bank and IFC, as provided by the Plan, contribute that part of the actuarial cost not provided by the contributions of the employees.

Administrative expenses are paid by the Bank and IFC and are not included in the accounts of the Fund.

Investments are recorded at cost or amortized cost. Gains and losses on sales, measured by the difference between the average cost and the proceeds of sales, are recorded at the trade date.

Note 2 - Amortization of Unfunded Liability

On April 22, 1975, the Bank and IFC made arrangements for payment of the unfunded liability at December 31, 1974 over a forty-year period and for payment of any future actuarial experience gains or losses incurred in any one year over 15 years, and any future changes in past service liabilities due to changes in the Plan or in actuarial assumptions over 30 years. At December 31, 1979, the unfunded liability was \$105.9 million (\$115.2 million - 1978). The change in the unfunded liability includes a reduction of \$4.4 million resulting from changes in actuarial assumptions.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

Staff Retirement PlanInvestment Performance AnalysisPercentage Rates of Return*

	Annual Performance				
	1975	1976	1977	1978	1979
Total Fund	24.5	16.5	(3.6)	7.0	14.4
U.S. Common Stocks	29.6	18.4	(8.4)	4.9	18.7
Nondollar Investments	-	10.3	5.3	33.8	10.8
U.S. Fixed Income Investments	11.6	17.4	3.8	4.5	3.3
Real Estate	-	9.5	11.5	17.1	16.2

Indices

Becker Total Funds <u>1/</u>	22.9	16.6	(2.8)	5.4	13.1
Becker Equities <u>2/</u>	29.1	16.6	(5.5)	7.2	17.6
Becker Fixed Income <u>3/</u>	11.6	15.6	3.8	1.4	1.4
S&P 500	37.3	23.6	(7.4)	6.5	18.7
Capital International Index <u>4/</u>	-	3.7	19.2	33.9	6.0
Salomon Brothers Bond Index <u>5/</u>	14.6	18.6	1.7	(0.1)	(4.2)

Cumulative Annual Performance

	3 Year	5 Year	10 Year
	Total Fund	5.7	11.3
U.S. Common Stocks	4.5	11.8	4.1
Nondollar Investments	14.1	-	-
U.S. Fixed Income Investments	3.9	8.0	7.6
Real Estate	15.1	-	-

Indices

Becker Total Funds <u>1/</u>	4.8	10.6	4.3
Becker Equities <u>2/</u>	6.5	11.8	3.8
Becker Fixed Income <u>3/</u>	2.1	6.7	6.8
S&P 500	5.4	14.8	5.9
Capital International Index <u>4/</u>	19.2	19.1	9.7
Salomon Brothers Bond Index <u>5/</u>	(0.9)	5.8	6.2

*All rates of return are annualized and time-weighted.

1/ Median rate of return on total funds for the A. G. Becker sample of 4,000 U.S. institutional portfolios.

2/ Median rate of return on equity funds for the A. G. Becker sample of U.S. institutional portfolios.

3/ Median rate of return on bond funds for the A. G. Becker sample of U.S. institutional portfolios.

4/ An index of common stock performance in Europe, Australia and the Far East.

5/ An index of high-grade corporate bond performance in the U.S.

April 18, 1980

Mr. Bernard J. Holland
Pension Plan Administrator
International Bank for Reconstruction
and Development
1775 Pennsylvania Avenue, N.W.,
Room J-616
Washington, D.C. 20433

**BUCK
CONSULTANTS**

Re: December 31, 1979 Valuation of the Staff Retirement Plan

Dear Mr. Holland:

We have completed our actuarial valuation of the Staff Retirement Plan of the International Bank for Reconstruction and Development as of December 31, 1979 and, following our past practice, we are writing in advance of our formal report to communicate the valuation results.

Our calculations were based on employee data which you furnished and which included:

- (i) 5,267 active participants with a total annual net remuneration of \$138,328,093 and a corresponding gross remuneration of \$216,294,603;
- (ii) 16 participants not in contributory service, who were included for accrued benefits only; and
- (iii) 881 retired participants and beneficiaries, entitled to annual pensions of \$8,573,772 (some of which were not yet payable).

The valuation was based on the revised actuarial assumptions adopted by the Pension Finance Committee effective with the current valuation. These revised assumptions include an interest rate of 10%, compounded annually; a graded salary scale which averages about 9.0%; an annual rate of cost-of-living increases in pensions equal to 6%; and the use of the 5-year moving market average asset valuation method. In addition, the decremental probabilities were substantially revised in line with the Plan's recent experience. The full set of revised assumptions will be appended to our formal report on the valuation.

The results of the valuation are presented in the following valuation balance sheet, which shows the present and prospective assets and liabilities of the Plan as of the valuation date. The amount shown as "Present Assets" was determined on the basis of the new asset valuation method.

It should be noted that the assets shown on the balance sheet exclude an amount of \$4,554,304 paid in 1979 towards the unfunded liability payment due on January 1, 1980.

VALUATION BALANCE SHEET
PREPARED AS OF DECEMBER 31, 1979

<u>ASSETS</u>	
Present assets	\$ 328,623,360
Present value of prospective contributions:	
(a) From participants, at 7% of gross remuneration	168,982,817
(b) From the Bank, at 14% of gross remuneration	337,965,634
(c) From the Bank towards unfunded liability	<u>105,914,165</u>
Total Assets	\$ 941,485,976

<u>LIABILITIES</u>	
Present value of benefits payable on account of present retired participants and beneficiaries	\$ 105,667,923
Present value of prospective benefits on account of present participants	<u>835,818,053</u>
Total Liabilities	\$ 941,485,976

The unfunded liability of \$105,914,165 can be broken down as follows:

(a) Remaining portion of the \$68.2 million unfunded liability established as of December 31, 1974	\$ 65,715,860
(b) Less: remaining portion of 1975 experience gain	(5,616,111)
(c) Plus: remaining portion of unfunded liability created as a result of the 1976 amendments	2,034,629
(d) Plus: remaining portion of 1976 experience loss	5,479,867
(e) Plus: remaining portion of 1977 experience loss	23,710,877
(f) Plus: remaining portion of 1978 experience loss	23,577,260
(g) Less: net experience gain for 1979	(4,552,973)
(h) Less: reduction in unfunded liability resulting from changes in assumptions	<u>(4,435,244)</u>
Net unfunded liability as of December 31, 1979	\$ 105,914,165

The net experience gain of \$4,552,973 was the result of differences between the actual experience and that which was anticipated under the actuarial assumptions (before their revision). These differences can be analyzed as follows:

<u>Item</u>	<u>Gain (Loss)</u>
1. Service Retirement	\$ 242,655
2. Disability retirement	1,484,895
3. Death before retirement	1,479,552
4. Other terminations	2,832,767
5. Post-retirement mortality	(493,985)
6. Salary increases	(28,868,965)
7. Cost-of-living increases in pensions	(5,630,774)
8. Investment return (as computed under asset valuation method previously being used)	36,753,127
9. New participants during year (including net transfers to and from other organizations)	(2,373,349)
10. Changes in currency exchange rates affecting pensioners being paid in foreign currencies	(167,427)
11. Increase in minimum and maximum children's benefits under Section 4.8	<u>(705,523)</u>
Total experience gain (net)	<u>\$ 4,552,973</u>

The following table summarizes the additional payment required to be made by the Bank (over and above its regular contributions of 14% of gross remuneration), in accordance with the funding policy adopted in 1975:

AMORTIZATION OF UNFUNDED LIABILITY

ITEM	REMAINING	PAYMENT DUE		YEAR OF
	PORTION ON	ON JANUARY 1,		LAST
	DECEMBER 31, 1979:	1980*	1981**	PAYMENT
(a) Initial amount established on December 31, 1974	\$ 65,715,860	\$ 4,276,110	\$ 6,394,262	2014
(b) 1975 experience gain	(5,616,111)	(631,955)	(767,376)	1991
(c) 1976 Plan amendments	2,034,629	145,298	204,535	2007
(d) 1976 experience loss	5,479,867	583,968	718,538	1992
(e) 1977 experience loss	23,710,877	2,406,540	2,999,193	1993
(f) 1978 experience loss	23,577,260	2,290,170	2,889,642	1994
(g) 1979 experience gain	(4,552,973)	N/A	(598,597)	1995
(h) 1979 assumption changes	(4,435,244)	N/A	(470,487)	2010
Total	\$ 105,914,165	\$ 9,070,131	\$ 11,369,710	

*Based on a 6% interest assumption.
 **Based on a 10% interest assumption.

An estimate was made of the current termination liabilities, that is, the vested liabilities as defined in Opinion 8 of the Accounting Principles Board. The actuarial value was estimated to be \$263 million, based on the revised assumptions.

In accordance with the Pension Finance Committee's recent deliberations and the current discussions being held at the Bank, we have also calculated the current valuation results assuming the actuarial funding method is changed to the aggregate method. Under this method, the unfunded liability would be eliminated from the valuation balance sheet, and the present value of prospective contributions from the Bank would become the balancing item between the assets and the liabilities of the Plan. The Bank's contribution rate would then be determined by dividing this amount by the present value of future remuneration for all present participants on the valuation date.

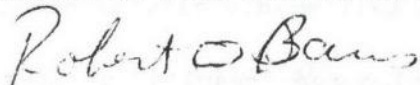
Mr. Bernard J. Holland
April 18, 1980
Page 5

APPENDIX E
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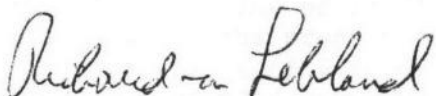
The application of this procedure as of December 31, 1979 would result in the Bank's aggregate contribution rate being set at 18.20% of covered gross remuneration. It should be noted that, under this method, the present assets would include the contributions made in 1979 towards the unfunded liability payment due on January 1, 1980.

Respectfully submitted,

GEORGE B. BUCK CONSULTING ACTUARIES, INC.



Robert D. Baus
Consulting Actuary



Richard M. Leblond
Consulting Actuary

Technical Annex

Differences Between Present and
Proposed Methods

1. A funding method represents the manner in which the results of the actuarial valuation, that is the actuarially determined assets and liabilities of the Plan, are used to determine the current contribution requirements, i.e. the amount of money that should be paid into the Plan in the year following the valuation date.

- Calculation of Liabilities

2. Under both the present and proposed methods the first step is to calculate the Plan liabilities. Using the actuarial assumptions, the probability and associated cost of each participant withdrawing, retiring, dying or becoming disabled in each year from the valuation date to his/her expected separation date is determined. The costs calculated in each year are then reduced to their present value, that is the present value of liabilities. At the same time the Actuaries project the salaries expected to be paid to each participant in each year through his/her expected date of separation. These amounts are also reduced to their present value, that is the present value of future salaries.

- Calculation of Contributions under Present Method

3. Under the present method, the next step is to deduct from the present value of liabilities (i) the value of the current assets and (ii) 21% of the present value of future salaries, which represents the present value of the expected normal contributions of the Bank and staff. Any remaining liabilities are called "unfunded liabilities" and are amortized by special payments over different periods depending on the Actuaries' estimate of the source of the unfunded liability: 40 years for unfunded liabilities in existence as of December 31, 1974; 30 years for unfunded liabilities that arise from benefit improvements or changes in the actuarial assumptions; and 15 years for unfunded liabilities that arise from deviations between actual and expected experience with the actuarial assumptions from year to year. Assuming there are no benefit changes or assumption changes in a year, any change in the unfunded liability will be due to experience gains or losses that have occurred during the year.

4. The 21% contribution rate was arrived at in 1974, on the basis of the current actuarial assumptions, as the rate which over the expected career lifetime of an average new entrant would be approximately sufficient to meet the liabilities accumulating on his/her behalf. There is a general

belief that the unfunded liabilities are a temporary phenomenon, due largely to the impact of inflation, and that when economic conditions improve the 21% normal contribution will be sufficient to meet all the Plan's liabilities. This may occur but we have no way of knowing when it will occur. Moreover, there are simply too many variables, some of them highly unpredictable, to develop a fixed contribution rate for an open-ended benefit scheme like the Plan..

- Calculation of Contributions under Proposed Method

5. Under the proposed method, the next step after calculating the present values of liabilities and future salaries would be to deduct from the present value of liabilities (i) the value of the current assets and (ii) 7% of the present value of future salaries, representing the present value of the staff's future contributions. The remaining liabilities would then be divided by the present value of future salaries. The resultant "aggregate rate" would be the rate required to balance assets and liabilities and would be the Bank's required contribution rate for that year. The following example develops for 1979 the calculation of the unfunded liability under the present method and the aggregate rate under the proposed method.

Step 1 (Same for both methods)

	<u>\$ million</u>
Actuaries first estimate: Present value of liabilities	941.5
Present value of future salaries	2,414.0
Value of present assets	<u>328.6</u>

Step 2 (Present method)

Actuaries then take: Present value of liabilities	941.5
and subtract: 21% of present value of future salaries	-507.0
and value of present assets	<u>-328.6</u>
The result is the unfunded liability	105.9

Step 2 (Proposed method)

Actuaries take: present value of liabilities	941.5
and subtract: 7% of present value of future salaries	-169.0
and value of present assets	<u>-328.6</u>
	443.9

Then: They divide the resulting number by the present value of future salaries

$$\frac{443.9}{2414.0}$$

The result is the aggregate rate - 18.39%*

*The aggregate rate shown in the valuation is 18.20%. The difference is because the actuaries included \$4.6 million of contributions made in 1979 toward the amortization payment due on January 1, 1980, in the value of present assets for the aggregate rate method, but did not include them for the present method.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

STAFF RETIREMENT PLAN

Committee Membership

As of May 1, 1980

PENSION BENEFITS ADMINISTRATION COMMITTEE

Mr. Martijn J. W. M. Paijmans, Vice-President, Administration, Organization,
Personnel Management - Chairman
Mr. Louis P. Michaels - Compensation Department - Vice-Chairman
Mr. Aron Broches - Former General Counsel of the Bank
Mr. Earl G. Drake - Executive Director
Mrs. Raquel Owen - Staff Association Nominee
Mr. Moeen A. Qureshi - ex-officio
Mr. Giorgio Rota - Executive Director
Mr. Franco Ruberl - Staff Association Nominee
Mr. Hugh N. Scott - Assistant General Counsel, Policy Administration
and Finance

Mr. Bernard Holland - Secretary
Mr. Roshdi A. Hamamo - Assistant Secretary

The following also served on the Pension Benefits Administration
Committee during 1979:

Mr. I.P.M. Cargill - ex-officio from 1/1/79 to 8/1/79
Mr. Morton M. Mendels - Former Secretary of the Bank from 1/1/79 to 4/1/80

PENSION FINANCE COMMITTEE

Mr. Moeen A. Qureshi, Vice-President, Finance - Chairman
Mr. K. Georg Gabriel - Director, Programming and Budgeting Department -
Vice-Chairman
Mr. Jon Hagler - Vice-President, Treasurer; Ford Foundation - Outside Member
Mr. A. Ij. A. Looijen - Executive Director
Mr. Placido Mapa - Executive Director
Mr. Martijn J. W. M. Paijmans - ex-officio
Mr. Abraham A. Raizen - Staff Association Nominee
Mr. Eugene H. Rotberg - Treasurer
Mr. Jo W. Saxe - Staff Association Nominee
Mr. Davidson Sommers - Former General Counsel of the Bank

Mr. Eugene R. Black - Former President of the Bank - Honorary Member

Mr. Bernard Holland - Secretary
Ms. Hilda Ochoa - Assistant Secretary

The following also served on the Pension Finance Committee during 1979:

Mr. I. P. M. Cargill, as Chairman, from 1/1/79 to 8/1/79
Mr. Nabil Faltas, Staff Association Nominee, from 1/1/79 to 4/1/80
Mr. Robert Johnston, Executive Director, from 1/1/79 to 8/15/79

F. CONTROLLER'S GROUP

717/4/24

F. CONTROLLER'S GROUP

Functions and Responsibilities

1. The Controller's Group is essentially a service organization providing financial, control and accounting services to the Bank Group. It is responsible for:

- (i) the accounting of the Bank;
- (ii) the financial administration of loans and credits;
- (iii) the administrative expense functions of the Bank;
- (iv) the financial administration of trust funds;
- (v) the provision of supporting services to the regional organizations and the Legal Department in the negotiation of loans, and the Treasurer's Department in the investment of liquid resources;
- (vi) the preparation of short-term financial projections;
and
- (vii) the collection of data and reporting on the source of procurement of goods and services financed from the proceeds of loans and credits.

Current Issues

2. Currency Pooling System. For World Bank loans negotiated prior to July 1, 1980, borrowers were required to repay their loans in the various currencies in which the loans were disbursed. Because it was impossible to disburse the same currencies equally under all loans, the individual loans differed in currency composition and, consequently, in the exchange risks that they presented to the borrowers.

3. All World Bank loans negotiated after July 1, 1980 have been brought under a currency pooling system. Under the new system, the risks of currency fluctuations in connection with Bank loans are equalized among all borrowers. Those borrowers with loans negotiated prior to July 1, 1980 have been invited to join the system for the undisbursed portion of their loans.

4. While currency pooling will equalize exchange risk as between borrowers, it will not affect the total exchange risk for borrowers as a group. The latter is dependent on the Bank's borrowing, investment and disbursement practices, and there has been pressure from time to time in the Board and elsewhere for a critical review of these practices.

5. Use of SDRs in the Bank's Accounts. While the Bank's capital has been expressed in SDRs since April 1, 1978, the SDR has not been adopted as the Bank's official unit of value for financial statement presentation. The question of whether it should be so adopted is under examination.

Reference Document

F.1.01 The Currency Pooling System

The Currency Pooling System

717/4/23

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September 1980	
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World Bank 1818 H Street, N.W. Washington, D.C., 20433, U.S.A.	
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Introduction

Contents

Under the terms of World Bank loans that were negotiated before July 1, 1980, the borrowers were required to repay their loans in the various currencies in which the loans were disbursed. Because it was impossible to disburse the same currencies equally under all loans, the loans differed in currency composition and, consequently, in the exchange risks that they presented to the borrowers in relation to a common denominator such as the U.S. dollar.

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Chapter 1
Introduction

The Concept

Under the terms of World Bank loans that were negotiated before July 1, 1980, the borrowers were required to repay their loans in the various currencies in which the loans were disbursed. Because it was impossible to disburse the same currencies equally under all loans, the individual loans differed in currency composition and, consequently, in the exchange risks that they presented to the borrowers in relation to a common denominator such as the U.S. dollar.

All World Bank loans negotiated on or after July 1, 1980, are subject to a new arrangement called the Currency Pooling System. Under the new system, the risks of currency fluctuations in connection with Bank loans are equalized among all borrowers. This paper describes the way in which the system works. A more detailed explanation is being prepared as a guide for the accountants and auditors of borrowers.

Chapter 1 explains the concept of the system. Chapter 2 deals with the operation and accounting procedures connected with it. In Chapter 3 the new system is compared with the system that is applicable to loans negotiated before July 1, 1980. Chapter 4 sets forth the procedure for transferring to the system the undisbursed balances on loans negotiated before July 1, 1980. An annex provides a technical illustration of the operation of the system.

pool for each day, and revaluing the principal outstanding on each loan in the pool by this rate. By this procedure the currencies disbursed and outstanding in the pool are in effect prorated among all participating loans according to their respective shares in the pool.

Chapter 1

The Concept

The purpose of the newly established Currency Pooling System is to equalize among all borrowers at any time the risks inherent in fluctuations in the exchange rates of the currencies disbursed and repayable on all Bank loans included in the system. Equalization is achieved by pooling all currencies disbursed and outstanding on participating loans and by expressing the outstanding principal amount of each such loan as a share of the pool; the share of each loan in the pool is equivalent to the value of its outstanding principal amount divided by the aggregate value of the outstanding principal amounts of all loans in the pool. Thus, whereas under the old system loan-service obligations under the terms of each loan were directly and exclusively related to the amounts in various currencies disbursed on that loan, under the Currency Pooling System loan-service obligations on each participating loan are related to all amounts in various currencies disbursed and outstanding on all loans in the system.

The Currency Pooling System ensures that the currency composition of the obligation to pay principal and interest on any participating loan will at any time be the same as that on any other loan in the pool. This objective is accomplished by revaluing the pool of currencies daily, using the U.S. dollar as a common denominator, determining the rate of appreciation or depreciation of the pool for each day, and revaluing the principal outstanding on each loan in the pool by this rate. By this procedure the currencies disbursed and outstanding in the pool are in effect prorated among all participating loans according to their respective shares in the pool.

The principal of each loan that is not yet due at the close of business the preceding day is multiplied by the revaluation factor to give the revalued opening balance of the borrower's Indebtedness Sub-Account. This balance is identical to the U.S. dollar equivalent of the loan's share of the currencies in the pool at the opening of business at the exchange rates of the day. Once the balances outstanding from the preceding day have been revalued, transactions can proceed. Whether those transactions are disbursements or repayments, they are converted into their U.S. dollar equivalents at the exchange rates of the day. The U.S. dollar equivalent balance of any loan at the end of the day is thus the opening balance after revaluation, minus the U.S. dollar equivalent of any amount due, plus the U.S. dollar equivalent of any disbursement on that loan.

Calculation of Repayments of Principal

At the time that a loan is made, an amortization schedule is agreed upon. The schedule is expressed in U.S. dollars and represents at any

Chapter 2

How the System Works

When a loan is made, the amount of the loan is credited to a Loan Account, the purpose of which is to record the Bank's commitment and its drawdown by the borrower. Disbursements from the Loan Account are recorded in that account in U.S. dollars. The principal outstanding on a borrower's loan is reflected in a Borrower's Indebtedness Sub-Account. Disbursements on a loan and repayments of principal are recorded in this account in U.S. dollars. A Withdrawals Outstanding Account is also maintained to reflect the disbursements at their original dollar values and loan repayments converted into U.S. dollars at the exchange rates prevailing at the time of disbursement.

The currencies disbursed on pooled loans are recorded in a Central Disbursement Account. The amounts of the currencies recalled for the principal maturities under the loans are deducted from this account on their respective due dates so that the balance of the account at any time represents the pool of currencies disbursed and not yet due for repayment on all loans in the system. The Central Disbursement Account is a consolidated account of the pooled principal on all loans included in the system.

At the opening of each day, before any transactions of that day have been recorded, the preceding day's closing balances of the currencies in the Central Disbursement Account are revalued, in U.S. dollar equivalents, using the exchange rates of the day. The proportionate change in the value of the pool is called the revaluation factor of the day.

The principal of each loan that is not yet due at the close of business the preceding day is multiplied by the revaluation factor to give the revalued opening balance of the Borrower's Indebtedness Sub-Account. This balance is identical to the U.S. dollar equivalent of the loan's share of the currencies in the pool at the opening of business at the exchange rates of the day. Once the balances outstanding from the preceding day have been revalued, transactions can proceed. Whether those transactions are disbursements or repayments, they are converted into their U.S. dollar equivalents at the exchange rates of the day. The U.S. dollar equivalent balance of any loan at the end of the day is thus the opening balance after revaluation, minus the U.S. dollar equivalent of any amount due, plus the U.S. dollar equivalent of any disbursement on that loan.

Calculation of Repayments of Principal

At the time that a loan is made, an amortization schedule is agreed upon. The schedule is expressed in U.S. dollars and represents at any

time the disbursements outstanding at their historical U.S. dollar equivalents, plus the undisbursed balance of the loan. Because of daily revaluations, the amount outstanding as shown in the Borrower's Indebtedness Sub-Account will not be the same as the disbursements outstanding at their original dollar values. The ratio of the principal outstanding in the Borrower's Indebtedness Sub-Account at current rates of exchange to the disbursements outstanding at their original dollar values is called the amortization adjustment factor. A repayment is calculated by multiplying the amount shown in the original amortization schedule by the amortization adjustment factor. If in the course of time, for example, exchange-rate movements increased the dollar value of the disbursements outstanding, by say, 10 percent, the dollar value of the amount to be repaid would also be increased by 10 percent.

Indexing

All loans included in the system can be regarded as loans indexed in U.S. dollars, payable in various currencies, on which each disbursement is indexed to the day-to-day variations in the total U.S. dollar value of the pool. The indexes to be used are the revaluation factor, defined earlier, which measures the rate of variation of the U.S. dollar value of the pool from the preceding day because of changes in the exchange rates; the cumulative revaluation factor, which is the product of the daily revaluation factors for all the days in a period and which measures the variation in the U.S. dollar value of the pool caused by changes in the exchange rates during the period; and the amortization adjustment factor, also defined earlier, which is identical to the average cumulative revaluation factor for the withdrawals outstanding on the loan weighted by the amount of the withdrawals. A more detailed explanation of the calculation of these indexes and their use in the calculation of the pooled principal of a loan on any given date is provided in the Annex.

Reports and Statements to the Borrower

A Disbursement Advice is sent to the borrower each time that a disbursement on the loan is made, giving the borrower details of the disbursement transaction. At the end of each semimonthly period, statements are sent to the borrower showing all the activities that have taken place and the balances of the Loan Account, the Borrower's Indebtedness Sub-Account, and the Central Disbursement Account for the period. The semimonthly statements give full details as to exchange rates, daily loan shares, amortization adjustment factors, and daily revaluation factors.

A Comparison with the Old System

Loan Service

Since the value of the principal repayment obligation and the value of loan charges--that is, commitment charges and interest--that are due cannot be determined in advance of the due date, the borrower makes provisional loan-service payments on the basis of a provisional bill prepared by the Bank. The provisional bill gives the provisional amount in the currency designated for payment on the basis of the information that is available two months before the due date. If the funds received in loan service from the borrower exceed the amounts actually due, the excess is returned to the borrower unless the amount is insignificant, in which case it is carried forward to the next loan-service due date. If the funds received are insufficient to meet the amount due, the amount of the shortfall is established in the currency previously designated for payment and the borrower is billed for this amount for settlement. If the shortfall is in loan charges and the amount is not significant, it is settled on the next loan-service due date.

In contrast, the principal outstanding on any loan under the Currency Pool After the due date, a statement is sent to the borrower showing the actual amounts due and the excess or shortfall, if any, of funds received and informing the borrower of the way in which the excess or shortfall is to be settled.

All funds received by the Bank from a borrower in payment of principal or loan charges are applied in settlement of the borrower's payment obligation on the due date. If the funds received by the Bank on or before the due date are the amounts billed but are insufficient to meet the values due they are applied to principal, if any, commitment charges, and interest in that order. Any part of the borrower's obligation not settled on the due date becomes a late payment obligation in the currency previously designated by the Bank for payment. Funds received by the Bank after the due date are applied to commitment charges, interest, and principal, if any, in that order.

Under the Currency Pooling System the U.S. dollar value of the repayment obligation is determined by the application of the amortization adjustment factor to the amount of the maturity, and the selection of the currency repayable will not affect the current U.S. dollar value of the amount that is to be repaid.

Chapter 3

A Comparison with the Old System

There are two principal differences between the loans made under the Currency Pooling System and the loans negotiated before July 1, 1980, which are designated old loans. They concern the definition of the principal outstanding and the definition of the repayment obligation of loan maturities. The principal outstanding on an old loan consists of the currencies disbursed on that loan. Since the currency that the Bank selects for disbursement varies from time to time, depending on the currencies available for disbursement, the currency composition of the principal outstanding at any time may be significantly different from one loan to another. The variation in the currency composition of the principal outstanding among old loans at any time implies unequal rates of appreciation or depreciation of the U.S. dollar values of the principal outstanding during any given period. This can cause unequal gains or losses in value among the borrowers and unequal rates of realized gains and losses in exchange on repayment.

In contrast, the principal outstanding on any loan under the Currency Pooling System has at any time the same currency composition as other loans and consequently carries the same exchange risks. In addition, the rate of variation in the U.S. dollar value of a disbursement on a loan is identical for all disbursements made on the same day on all loans, for any given period of time.

Exchange Losses and Gains

The second difference is in the repayment obligation for the loan amortization maturities, which are expressed in U.S. dollars in the loan agreement. For old loans the repayment obligation on any maturity is established in a currency or currencies selected by the Bank from among the currencies then outstanding on the loan. The amount in currency is equivalent, at the exchange rate when the currency was disbursed, to the amount of the maturity listed in the loan agreement. Under this arrangement, the borrower repays to the Bank, during the life of the loan, the exact amount in each currency that was disbursed on the loan. The order in which the Bank recalls those currencies for the respective maturities, however, will produce different realized exchange losses or gains, in current U.S. dollars, depending on the movements of exchange rates.

Under the Currency Pooling System the U.S. dollar value of the repayment obligation is determined by the application of the amortization adjustment factor to the amount of the maturity, and the selection of the currency repayable will not affect the current U.S. dollar value of the amount that is to be repaid.

While the system will equalize exchange risks among borrowers, it will not provide any protection against the overall risk of fluctuations in the values of currencies used by the Bank for lending. That risk will continue to be borne by the borrowers as a group.

Loan Administration and Accounting

The Currency Pooling System should reduce the accounting that must be done by the borrower. At present, the principal outstanding on an old loan consists of the various currencies disbursed and outstanding on that loan. On the average, there are about ten currencies outstanding on a loan, while several loans have as many as twenty-six, and accounting in each of those currencies is required. Under the Currency Pooling System, borrowers need only to keep a Loan Ledger--the counterpart of the Bank's Loan Account--a Withdrawals Outstanding Ledger--the counterpart of the Bank's Withdrawals Outstanding Account--and a Principal Outstanding Ledger--the counterpart of the Borrower's Indebtedness Sub-Account in the books of the Bank--all three to be kept in U.S. dollars. The amount of each disbursement in the three ledgers will be identical, and the balances in the three ledgers will be reconcilable by the application of the relevant index numbers.

Further, the borrower will be relieved of the administrative burden of acquiring several currencies, some of which may not be easily obtainable, for debt-service payments every six months. On old loans, principal and interest are payable in the several currencies outstanding on the loan, while commitment charges are payable in U.S. dollars. Under the Currency Pooling System, loan service due for a loan on a given date will normally be payable in a single currency designated by the Bank.

Chapter 4

Undisbursed Balances on Old Loans

Introduction

1. As stated in the Introduction, the Currency Pooling System applies to all loans negotiated on or after July 1, 1980. In view of its advantages, it has been decided to give borrowers the option to include the undisbursed portion of old loans in the system. The procedure for exercising this option is as follows:

2. Table 1 illustrates the operation of the Central Disbursement Account.

. The Bank sends a letter to the borrower inviting its consideration to the transfer of the undisbursed portion of existing loans into the pool.

. The borrower gives notice to the Bank that withdrawals from the loan on and after a date determined by the Bank should be covered by the Currency Pooling System.

3. It should be noted that all currency amounts and their U.S. dollar equivalents

. After receipt of such a notice, the Bank and the borrower execute a letter agreement to amend the loan agreement.

. Upon receipt by the Bank of satisfactory evidence that the execution and delivery of the letter agreement have been duly authorized or ratified and that the letter agreement is legally binding on the borrower in accordance with its terms, the Bank dispatches a notice of effectiveness to the borrower.

Central Disbursement Account - Table 1

All disbursements after the date of this notice of effectiveness are made under the new system. The original amortization schedule remains in force, but the currencies disbursed and outstanding on the loan as of this date are recalled first in repayment, and repayments of the principal disbursed under the system will commence only when these previously disbursed currencies have been fully repaid.

of the following day. These are revalued at the AERs of the following business day to form the revalued opening balances in U.S. dollar equivalents of that day. The Revaluation Factor for the Pool is computed each day as a ratio of that day's total U.S. dollar value of the opening currency balances to the previous day's closing total U.S. dollar value of those (same) currency balances.

Loan Accounts, Withdrawals Outstanding Accounts and Borrower's Indebtedness Sub-Accounts - Table 2

5. The Loan Account, Withdrawals Outstanding Account, and the Borrower's Indebtedness Sub-Account for each loan are maintained in U.S. dollar equivalents only.

6. The Loan Account is credited with the amount of the loan, which is expressed in U.S. dollars. The borrower has the right to withdraw currencies from the Loan Account. These withdrawals are charged to the Loan Account at the U.S. dollar equivalent of the currency that the Bank disbursed in order

Technical Illustration

Introduction

1. In this Annex, the operations of the Currency Pooling System are explained using a three-currency, three-loan model, covering disbursements and repayments over nine transaction days in two consecutive pool periods. The data are presented in the form of six tables that appear at the end of the Annex.

2. Table 1 illustrates the operation of the Central Disbursement Account. Table 2 shows the corresponding accounting in the Loan Account, Withdrawals Outstanding Account, and the Borrower's Indebtedness Sub-Account. Tables 3.1 and 3.2 illustrate the relationship between the Revaluation Factor and the Amortization Adjustment Factor for the two periods. And Tables 4.1 and 4.2 illustrate the method by which interest is calculated.

3. It should be noted that all currency amounts and their U.S. dollar equivalents in withdrawal terms have been expressed to the number of decimal places (two) necessary to conform to usage. However, any amounts resulting from valuations, revaluations, or distribution, are expressed to six decimal places (rounded) in order to minimize the influence at the second and third decimal places. For the same reason, all factors have been expressed to the eleventh decimal place (rounded) and ratios expressed as percentages have been expressed to nine decimal places (rounded).

Central Disbursement Account - Table 1

4. In the Central Disbursement Account, the currency amounts of principal transactions and their U.S. dollar equivalents, calculated at the respective Applicable Exchange Rates (AERs), are recorded for each day. Balances are established in currencies and in U.S. dollar equivalents for the close of each day. The currency balances are then carried forward to become the opening balances of the following day. These are revalued at the AERs of the following business day to form the revalued opening balances in U.S. dollar equivalents of that day. The Revaluation Factor for the Pool is computed each day as a ratio of that day's total U.S. dollar value of the opening currency balances to the previous day's closing total U.S. dollar value of those (same) currency balances.

Loan Accounts, Withdrawals Outstanding Accounts and Borrower's Indebtedness Sub-Accounts - Table 2

5. The Loan Account, Withdrawals Outstanding Account, and the Borrower's Indebtedness Sub-Account for each loan are maintained in U.S. dollar equivalents only.

6. The Loan Account is credited with the amount of the loan, which is expressed in U.S. dollars. The borrower has the right to withdraw currencies from the Loan Account. These withdrawals are charged to the Loan Account at the U.S. dollar equivalent of the currency that the Bank disbursed in order

Day 8	1.60	3.70
Day 9	1.55	3.80

to furnish the borrower with the currency withdrawn. The balance in the Loan Account is the undisbursed amount of the loan; total withdrawals plus the Loan Account balance equals at all times the amount of the loan.

7. The Withdrawals Outstanding Account is a subsidiary account which records the principal outstanding and not yet due in terms of the loan amount.

8. The Borrower's Indebtedness Sub-Account reflects the daily value in U.S. dollar terms of the loan's principal outstanding and not yet due (pooled principal), or the loan's share of the currencies in the Central Disbursement Account (the Pool). In Table 2, the activities of the Borrower's Indebtedness Sub-Account are shown under the heading "Principal Outstanding."

9. Individual transactions are recorded at their U.S. dollar equivalents at the Applicable Exchange Rates of the day in the Borrower's Indebtedness Sub-Account, while their value in withdrawal terms is entered into the Withdrawals Outstanding Account. For disbursements, the Loan Account will also be reduced by the amount of the withdrawal, to show the new amount of the undisbursed balance.

10. At the close of each day, balances are established in the Loan Accounts, Withdrawals Outstanding Accounts, and in the Borrower's Indebtedness Sub-Accounts. The sum of the closing balances of the Borrower's Indebtedness Sub-Accounts will be equal to the U.S. dollar value of the closing balance of currencies in the Central Disbursement Account (see Table 1).

11. Loan Share ratios are calculated for each day as a ratio of the U.S. dollar value of a loan's closing balance in the Borrower's Indebtedness Sub-Account to the U.S. dollar value of the closing balance of currencies in the Central Disbursement Account. Loan Share ratios represent the share of each loan in the currencies disbursed and outstanding in the Central Disbursement Account.

12. The balances in the Borrower's Indebtedness Sub-Accounts at the close of each day are revalued on the following business day by the application of the Pool Revaluation Factor to form the opening balances for the new day.

13. Table 2 also displays the daily Amortization Adjustment Factor for each loan. This ratio expresses the relationship between the opening balance of a Borrower's Indebtedness Sub-Account and the withdrawals outstanding. It is used to translate principal amounts from their current U.S. dollar values to their respective values in withdrawal terms, or vice versa. The relationship between the Amortization Adjustment Factor and the Pool Revaluation Factor is explained in paragraphs 30. through 33.

Pool and Loan Activities

14. The model used to illustrate the currency pooling methodology consists of three loans as follows:

	<u>Loan 3001</u>	<u>Loan 3002</u>	<u>Loan 3003</u>
Loan amount (U.S. dollars)	1000.00	2000.00	3000.00

15. Disbursement and repayment transactions under this pooling system are assumed to occur on nine transaction days in three currencies: currency A, currency B, and the U.S. dollar. These transactions have been designed to take place in two periods and are summarized in the table below.

<u>Period I</u>	<u>Loan 3001</u>	<u>Loan 3002</u>	<u>Loan 3003</u>
Day 1 Disbursement	A 200.00		
Day 2 Disbursement		B 620.00	
Day 3 Disbursements		A 760.00	\$ 300.00
Day 4 Disbursement		\$ 500.00	
Day 5 Repayment		(Maturity of \$ 100.00) -B 345.57	
<u>Period II</u>			
Day 5 Disbursements		A 350.00	\$ 100.00
Day 6 Disbursement			A 170.00
Day 7 Disbursements		\$ 200.00	A 495.00
Day 8 Disbursement			B 740.00
Day 9 Repayment		(Maturity of \$ 200.00) -B 794.29	

16. The following Applicable Exchange Rates (AERs) have been assumed for the two nondollar currencies over the two pool periods:

	<u>Currency A</u>	<u>Currency B</u>
Day 1	2.00	3.00
Day 2	1.95	3.10
Day 3	1.90	3.20
Day 4	1.80	3.30
Day 5	1.75	3.40
Day 6	1.70	3.50
Day 7	1.65	3.60
Day 8	1.60	3.70
Day 9	1.55	3.80

17. On any day, the respective Loan Accounts are charged with the U.S. dollar equivalents at the day's AERs of the currencies of withdrawal, which are the same as the currencies of disbursement. For instance, on Day 3, Loan Account 3002 is charged with \$400.00 equivalent (A 760.00 at AER 1.90) and Loan Account 3003 is charged with \$300.00 equivalent (\$300.00).

18. The respective Borrower's Indebtedness Sub-Accounts are debited on Day 3 with the U.S. dollar equivalents of the currencies disbursed to the borrowers under their loans, at the day's AERs for those currencies. These U.S. dollar equivalents will be the same as those charged to the individual Loan Accounts and will also be entered into the balances of the Withdrawals Outstanding Account, viz., \$400.00 equivalent to Loan 3002 and \$300.00 equivalent to Loan 3003.

19. The Central Disbursement Account is debited with the currency amounts disbursed and their U.S. dollar equivalents at the day's AERs for those currencies. Accordingly, on Day 3, the Central Disbursement Account is debited with A 760.00 and \$400.00 equivalent for currency A, and \$300.00 for the U.S. dollar.

20. There being no further transactions on Day 3, closing balances are established for the Central Disbursement Account in the currencies as well as in U.S. dollar equivalents, and for the Loan Accounts and Borrower's Indebtedness Sub-Accounts in U.S. dollar equivalents alone. The closing currency balances of the Central Disbursement Account for any day are determined by adding the currency amounts of the disbursements for that day to the opening currency balances of that day; likewise, the U.S. dollar equivalents of the closing currency balances in the Central Disbursement Account for any day are determined by adding the U.S. dollar equivalents of the disbursements for that day in each currency to the revalued U.S. dollar equivalents of the opening currency balances on that day.

21. Accordingly, the closing balances of the Central Disbursement Account for Day 3 are A 960.00 (\$505.263158 equivalent), B 620.00 (\$193.750000 equivalent), and \$300.00, making up a total of \$999.013158 equivalent for the Pool. The closing balances (undisbursed principal) for the individual Loan Accounts on Day 3 are: Loan 3001, \$900.00; Loan 3002, \$1,400.00; and Loan 3003, \$2,700.00. The closing balances on Day 3 in the Borrower's Indebtedness Sub-Accounts are: Loan 3001, \$101.360393 equivalent; Loan 3002, \$597.652765 equivalent; and Loan 3003, \$300.000000 equivalent, making a total of \$999.013158 equivalent. It will be observed that the closing balance in U.S. dollar equivalent of the currencies outstanding in the Central Disbursement Account is equal to the total of the closing balances of the Borrower's Indebtedness Sub-Accounts.

22. Once the closing balances for a day have been established, the Loan Share ratio for each loan is computed in order to determine the share of each loan in each of the currencies in the Pool. Based on the balance outstanding in the Borrower's Indebtedness Sub-Account for each loan at the close of Day 3, the respective Loan Shares in the total Pool of \$999.013158 equivalent are--

3.70	1.00	Day 8
3.80	1.22	Day 9

Loan 3001: $\frac{\$101.360393}{\$999.013158} \times 100 = 10.146051850\%$
 Loan 3002: $\frac{\$597.652765}{\$999.013158} \times 100 = 59.824313645\%$
 Loan 3003: $\frac{\$300.000000}{\$999.013158} \times 100 = 30.029634505\%$

23. Central to the currency pooling concept is the fact that each loan has a proportionate share in each currency in the Pool. Since all transactions in each currency have been translated into U.S. dollar equivalents at a single exchange rate, the closing balance of the Borrower's Indebtedness Sub-Account for a loan will represent the total U.S. dollar value of that loan's share of the currencies in the Pool. Thus, at the close of Day 3, using the Loan Share ratios for that day, the distribution of currencies among the individual loans will be as shown in the following table:

Loan Share ratios	Loan 3001 (10.14605180%)		Loan 3002 (59.824313645%)		Loan 3003 (30.029634505%)		Pool (100.000000000%)		
	Day 3 AER	Currency Amount	US\$ Equiv.	Currency Amount	US\$ Equiv.	Currency Amount	US\$ Equiv.	Currency Amount	US\$ Equiv.
A	1.90	97.402098	51.264262	574.313411	302.270216	288.284491	151.728679	960.00	505.263158
B	3.20	62.905521	19.657975	370.910745	115.909608	186.183734	58.182417	620.00	193.750000
US\$	1.00	30.438156	30.438156	179.472941	179.472941	90.088904	90.088904	300.00	300.000000
Totals		<u>101.360393</u>	<u>101.360393</u>	<u>597.652765</u>	<u>597.652765</u>	<u>300.000000</u>	<u>300.000000</u>	<u>999.013158</u>	<u>999.013158</u>

24. The closing balances in currencies in the Central Disbursement Account for Day 3 are carried forward to Day 4 to form the opening currency balances for that day. In the illustration, the balances carried forward to Day 4 are: currency A, 960.00; currency B, 620.00; and U.S. dollars, 300.00.

25. The opening currency balances in the Central Disbursement Account on Day 4 are valued at that day's AERs for the respective currencies to provide the revalued balance (U.S. dollar equivalents) for each currency and for the Pool. Thus, on Day 4, the respective opening balances in U.S. dollar equivalents for the three currencies are: currency A, 960.00 at AER 1.80 = \$533.333333 equivalent; currency B, 620.00 at AER 3.30 = \$187.878788 equivalent; and U.S. dollars 300.00, making a revalued balance of \$1,021.212121 equivalent for the

opening day and the daily transactions of a given period to derive the current value of the principal outstanding in the Borrower's Indebtedness Sub-Account.

Pool. The ratio of the total revalued U.S. dollar equivalent of the opening balance of currencies on Day 4 to the total U.S. dollar equivalent of the (same) closing balance of currencies for Day 3 is the Revaluation Factor for Day 4 and is calculated as: $\frac{\$1,021.212121}{\$999.013158} = 1.02222089151$.

26. The revalued opening balances of the Borrower's Indebtedness Sub-Accounts for Day 4 are determined by applying the Pool Revaluation Factor for Day 4 to the respective closing balances of the Borrower's Indebtedness Sub-Accounts on Day 3 carried forward to Day 4. Thus, the revalued balances at the opening of Day 4 are--

- Loan 3001: $1.02222089151 \times \$101.360393 = \103.612711
- Loan 3002: $1.02222089151 \times \$597.652765 = \610.933142
- Loan 3003: $1.02222089151 \times \$300.000000 = \306.666267

This makes a total of \$1,021.212120 for all the loans. Since the currency composition of the individual loans is identical to that of the Central Disbursement Account and remains unchanged from the close of one day to the opening of the next, the revalued opening balance in the Borrower's Indebtedness Sub-Account for a loan will correctly reflect the total of the revalued U.S. dollar equivalents of that loan's share of currencies in the Pool, as shown in the following table:

Day 4 AER	Loan 3001		Loan 3002		Loan 3003		Pool		
	Currency Amount	US\$ Equiv.	Currency Amount	US\$ Equiv.	Currency Amount	US\$ Equiv.	Currency Amount	US\$ Equiv.	
A	1.80	97.402098	54.112277	574.313411	319.063006	288.284491	160.158051	960.00	533.333333
B	3.30	62.905521	19.062279	370.910745	112.397195	186.183734	56.419313	620.00	187.878788
US\$	1.00	30.438156	30.438156	179.472941	179.472941	90.088904	90.088904	300.00	300.000000
Totals			<u>103.612712</u>	<u>610.933142</u>	<u>306.666268</u>			<u>1,021.212121</u>	

27. For principal recalls it is necessary first to determine the value of the recall on the due date. This is done by application of the Amortization Adjustment Factor to the amount of the maturity in withdrawal terms. Thus, Loan 3002 has a maturity of \$100.00 in withdrawal terms due on Day 5. The Amortization Factor is applied to the amount of the maturity in withdrawal terms in each of the currencies in the Pool. Based on the balance outstanding in the Borrower's Indebtedness Sub-Account for each loan at the close of Day 3, the respective Loan Shares in the total Pool of \$999.013158 equivalent are--

Adjustment Factor for Loan 3002 on Day 5 is 1.01638722364. The value of the maturity in current U.S. dollar terms on Day 5, therefore, is $\$100.00 \times 1.01638722364 = \101.638722 . After the currency in which the maturity is to be requested from the Borrower has been designated, the current U.S. dollar value of 101.638722 must be translated into its equivalent amount in that currency using the Applicable Exchange Rate of the due date. In the example, the currency designated for repayment by the Borrower is currency B. The Borrower's obligation for the maturity, therefore, is $\$101.638722 \times \text{AER } 3.40 = \text{B } 345.57$. On the due date, this amount and its U.S. dollar equivalent of 101.638235 are credited to the Central Disbursement Account; the Borrower's Indebtedness Sub-Account for Loan 3002 is credited with $\$101.638235$; and the withdrawals outstanding are reduced by $\$100.00$, which is the value of the maturity in withdrawal terms.

28. The procedures described in the preceding paragraphs will continue to be applied from one day to the next in the operation of the Currency Pooling System.

Revaluation Factors, Cumulative Revaluation Factors and Amortization Adjustment Factors - Tables 3.1 and 3.2

29. In the preceding paragraphs and in Chapter 2, mention has been made of the Revaluation Factor and the Amortization Adjustment Factor and the application of each in the Currency Pooling operation. The relationship between these two factors is explained in paragraphs 30. through 33. below.

30. Tables 3.1 and 3.2 illustrate how the daily Amortization Adjustment Factors for each loan are derived from the Pool Revaluation Factors and the withdrawals outstanding under each loan. The first part of each table displays the cumulative revaluation factor for each transaction day (horizontal) at the beginning of each succeeding day (vertical). Thus, the first figure of 1.02564103000 (Day 1, Table 3.1) is the cumulative revaluation factor for Day 1 transactions on Day 2. Since Day 1 was the first day of the Pool, this factor is nothing but the Revaluation Factor for Day 2. The second figure of 1.01360392827 under Day 1 is the cumulative revaluation factor for Day 1 transactions on Day 3. It is obtained by multiplying the Revaluation Factor for Day 2 by that for Day 3: $1.02564103000 \times .98826382586 = 1.01360392827$. Successive multiplications of the daily Revaluation Factors through the beginning of Day 5 produce the cumulative revaluation factor of 1.04274231256 for Day 1 transactions on Day 5. For the succeeding transaction days (Days 2 through 4, Table 3.1, and Days 5 through 8, Table 3.2), the procedure is the same: The first figure in the multiplication chain for each transaction day is the Revaluation Factor for the following day.

31. The second part of each table shows how the cumulative revaluation factors can be applied to the historical values of the withdrawals outstanding on the opening day and the daily transactions of a given period to derive the current value of the principal outstanding in the Borrower's Indebtedness Sub-Account.

For example, Loan 3002 had withdrawals of \$1,000.00 equivalent outstanding at the opening of Period II (Table 3.2) and had two transactions -- the first a disbursement of \$200.00 equivalent on Day 5, and the second a disbursement of \$200.00 equivalent on Day 7. The value of the borrower's total principal obligation at the opening of Day 9 is derived as follows:

$$\begin{aligned} & (\text{opening withdrawals outstanding (Day 5)} \times \text{opening Amortization Adjustment} \\ & \text{Factor (Day 5)} \times \text{cumulative revaluation factor for Day 5 on Day 9}) \\ + & (\text{Day 5 transaction} \times \text{cumulative revaluation factor for Day 5} \\ & \text{transactions on Day 9}) \\ + & (\text{Day 7 transaction} \times \text{cumulative revaluation factor for Day 7} \\ & \text{transactions on Day 9}). \end{aligned}$$

Numerically, this translates to:

$$\begin{aligned} & (\$1,000.00 \times 1.01638771100 \times 1.05289514892) \\ + & (\$200.00 \times 1.05289514892) \\ + & (\$200.00 \times 1.02757829180) \\ = & \$1,070.149690 + \$210.579030 + \$205.515658 \\ = & \$1,486.244378. \end{aligned}$$

32. The Amortization Adjustment Factor, as defined earlier, is the ratio of the opening balance of the Borrower's Indebtedness Sub-Account to the opening balance of withdrawals outstanding. In Tables 3.1 and 3.2, the Amortization Adjustment Factors have been computed daily for each loan from the daily figures for the principal outstanding and withdrawals outstanding.

33. From the foregoing, it can be seen that the Amortization Adjustment Factor for a loan, on any day, is simply the weighted average cumulative revaluation factor for that loan up to that day, using the historical transaction values as weights. For example, the Amortization Adjustment Factor for Loan 3002 on Day 9 is $\frac{\$1,486.244378}{\$1,400.00} = 1.06160312714$. This result can be expanded to

$$\frac{(\$1,000.00 \times 1.07014969033) + (\$200.00 \times 1.05289514892) + (\$200.00 \times 1.02757829180)}{\$1,400.00}$$

from the derivation in paragraph 31. above. The factors in the numerator of this expression are the cumulative revaluation factors for the opening withdrawals (Day 5), the Day 5 withdrawal and the Day 7 withdrawal, respectively, on Day 9. The U.S. dollar amounts are the historical transaction values of

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the opening withdrawals outstanding at the beginning of Period II and the withdrawals on Day 5 and Day 7, effectively constituting the weights.

34. To be noted also is that on the day of a principal recall, the Amortization Adjustment Factor after giving effect to the recall is likely to be different from that before deducting the recall. This is because the U.S. dollar equivalent credited to the Borrower's Indebtedness Sub-Account for a recall in a currency other than the U.S. dollar is likely to be different from the U.S. dollar value determined for the recall from the balance of the Borrower's Indebtedness Sub-Account before recall. This difference in the U.S. dollar amounts could be seen in the example of the principal recall discussed in paragraph 27. The value of the maturity due from the Borrower was calculated to be \$101.638722364. This, in turn, was translated into currency B, the currency designated for the repayment, at the Applicable Exchange Rate (AER) of the due date. This currency amount, however, was rounded to the appropriate number of decimal places to conform with usage. Translated back to U.S. dollar equivalents at the same AER, this rounded currency amount produced a figure of \$101.638235 equivalent.

Interest - Tables 4.1 and 4.2

35. Interest accrues daily on a loan's pooled principal outstanding, and the interest payment obligation will be the U.S. dollar value of interest accrued as of the due date. To compute the interest charge for a semi-annual period, the following methodology is adopted:

- Each disbursement is multiplied by the number of days it was outstanding during the interest period.
- The product is revalued by the Cumulative Revaluation Factor for the period the disbursement was outstanding.
- The revalued products (commonly referred to as charge numbers) for individual disbursements are aggregated and multiplied by the daily interest rate (the interest rate divided by 365 or 366, as appropriate) to arrive at the U.S. dollar value of the interest obligation payable on the due date. This obligation is payable in the currency designated by the Bank at the exchange rate of the due date.

36. Table 4.1 illustrates the application of this method of interest computation. The withdrawals are tabulated by day, because each day's withdrawals would be outstanding for a different number of days in the period and because each would have a different factor for determining its value on a specified date. Thus, in the illustration, Day 5 is assumed to be an interest payment date for Loan 3002. The number on which the interest charge for Loan 3002 on Day 5 would be based is the sum of the products for each of the Days 1

through 4 of the withdrawals on that day, the Cumulative Revaluation Factor for obtaining the value of those withdrawals on the due date (Day 5), and the number of days for which those withdrawals had been outstanding on the due date. The amount of \$1,936.194369, derived in this manner, represents the cumulative interest charge number for Loan 3002 on Day 5. The daily interest rate of the loan would be applied to this figure to obtain the U.S. dollar value of the borrower's interest payment obligation.

37. To facilitate semimonthly reporting to borrowers, the interest charge numbers are calculated for each semimonthly period based on the withdrawals outstanding at the beginning of the period and the disbursements during the period. To avoid having to carry forward individual withdrawals and their Cumulative Revaluation Factors separately from one semimonthly period to the next for as long as those withdrawals remain outstanding, the System uses the Amortization Adjustment Factor. This factor is applied to the total of withdrawals outstanding at the beginning of a semimonthly period as a proxy for the Cumulative Revaluation Factors, up to that date, for the individual withdrawals comprising the total. This is possible because, as explained in paragraphs 30. through 33., the Amortization Adjustment Factor is a weighted average of the Cumulative Revaluation Factors for the individual withdrawals outstanding, and also, because interest would accrue on these withdrawals for the entire semimonthly period. At the end of each semimonthly period, then, the opening withdrawals outstanding and the individual new disbursements are multiplied by the number of days for which the respective amounts were outstanding in that semimonthly period. The individual products and the cumulative charge number brought forward at the beginning of the semimonthly period are revalued by the appropriate Cumulative Revaluation Factors for the semimonthly period, and the results are aggregated and carried forward to the next semimonthly period. This process is continued until the due date for payment of interest.

38. Table 4.2 illustrates how withdrawals and charge numbers are carried over from one semimonthly period to the next and revalued. As an example, for Loan 3001, the withdrawals of \$100.00 equivalent brought forward on Day 5 are multiplied by the number of days (4) in Period II. The result is valued on Day 9 by the product of the Amortization Adjustment Factor for Loan 3001 on Day 5 (viz., 1.04274231000) and the Cumulative Revaluation Factor for Day 5 on Day 9 (viz., 1.05289514892), giving a charge number of \$439.159328. The cumulative charge number of \$417.096925 brought forward for Loan 3001 on Day 5 is revalued on Day 9 by the Cumulative Revaluation Factor for Day 5 on Day 9 (viz., 1.05289514892), producing a charge number of \$439.159329. The cumulative charge number for Loan 3001 on Day 9 then, is the sum of \$439.159328 and \$439.159329, i.e., \$878.318657. The same result could have been obtained by computing the charge number based on the original withdrawal of \$100.00 on Day 1 for the number of days during which that withdrawal was outstanding between Day 1 and Day 9 (viz., 8) and by revaluing the resulting product by the Cumulative Revaluation Factor for Day 1 on Day 9 (viz., $1.04274231256 \times 1.05289514892$).

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Table 1: Central Disbursement Account

	Currency Amounts					U.S. Dollar Equivalents				
	Principal (Reservation Factor)	Loan Account (1,000.00)	Withdrawals	Principal	Loan	Withdrawals	Principal	Loan	Total	
			Outstanding	Outstanding	Account		Outstanding	Outstanding		
			A	B	\$	A	B	\$		
Day 1 (Exchange Rate/Revaluation Factor)						(2.00)	(3.00)			
Opening Balance		1,000.00			7,000.00			1,000.00		
Recalls										
Disbursements	100.000000	-100.00	200.0000	100.000000		100.000000			100.000000	
Closing Balance	100.000000		200.0000		1,000.00	100.000000		1,000.00	100.000000	
Day 2						(1.95)	(3.10)		(1.02564103000)	
Opening Balance	102.564103	900.00	200.0000	102.564103	2,000.00	102.564103		1,000.00	102.564103	
Recalls	200.000000				-200.00					
Disbursements	302.564103	900.00	100.00	620.00	1,800.00	200.000000		3,000.00	200.000000	
Closing Balance			200.0000	620.00	980.001180	102.564103	200.000000		302.564103	
Day 3						(1.90)	(3.20)		(0.98826382586)	
Opening Balance	105.263158	900.00	100.00	620.00	1,300.00	105.263158	193.750000	1,000.00	299.013158	
Recalls	700.000000				-400.00			-100.00	300.00	
Disbursements	999.013158	900.00	100.00	101.380393	1,000.00	400.000000		300.000000	700.000000	
Closing Balance			760.00	620.00	300.00	505.263158	193.750000	300.000000	999.013158	
Day 4						(1.80)	(3.30)		(1.0222089151)	
Opening Balance	108.061311	900.00	100.00	102.613711	1,400.00	108.061311	187.878788	1,700.00	1,021.212121	
Recalls	100.000000							300.000000		
Disbursements	1,021.212121	900.00	100.00	103.613711	1,000.00	533.333333		2,700.00	500.000000	
Closing Balance			960.00	620.00	800.00	533.333333	187.878788	800.000000	1,521.212121	
Day 5						(1.75)	(3.40)		(1.00638454616)	
Opening Balance	105.263158	900.00	100.00	104.374231	900.00	105.263158	182.352941	1,700.00	1,530.924370	
Recalls	101.638235							-100.00	100.00	
Disbursements	300.000000	900.00	100.00	105.613711	1,000.00	548.571429		800.000000	1,006.38235	
Closing Balance			350.00	274.43	900.00	200.000000	80.714706	900.000000	300.000000	
Day 6						(1.70)	(3.50)		(1.01139815477)	
Opening Balance	1,021.212121	900.00	100.00	105.643785	700.00	1,021.212121	78.408571	900.000000	1,748.996806	
Recalls	100.000000							-100.00	100.00	
Disbursements	1,121.212121	900.00	100.00	106.812711	1,000.00	770.588235		2,500.00	500.000000	
Closing Balance			170.00	274.43	900.00	870.588235	78.408571	1,500.000000	1,848.996806	
Day 7						(1.65)	(3.60)		(1.01309004262)	
Opening Balance	1,048.996806	900.00	100.00	108.042777	900.00	1,048.996806	76.230556	900.000000	1,873.200253	
Recalls	1,014.893284							-100.00	100.00	
Disbursements	1,148.996806	900.00	100.00	109.435577	1,000.00	896.969697		2,000.000000	500.000000	
Closing Balance			495.00	274.43	1,100.00	1,196.969697	76.230556	1,100.000000	2,373.200253	
Day 8						(1.60)	(3.70)		(1.01489339846)	
Opening Balance	1,048.996806	900.00	100.00	109.435577	900.00	1,048.996806	74.170270	1,100.000000	2,408.545270	
Recalls	1,014.893284							-100.00	100.00	
Disbursements	1,148.996806	900.00	100.00	110.788277	900.00	1,234.375000		2,000.000000	200.000000	
Closing Balance			740.00	1,014.43	1,100.00	1,234.375000	274.170270	1,100.000000	2,608.545270	
Day 9						(1.55)	(3.80)		(1.01249874456)	
Opening Balance	1,048.996806	900.00	100.00	110.788277	900.00	1,274.193548	266.955263	1,100.000000	2,641.148811	
Recalls	1,014.893284							-100.00	100.00	
Disbursements	1,148.996806	900.00	100.00	112.130977	900.00	1,274.193548		200.000000	209.023684	
Closing Balance			-794.29	1,014.43	1,100.00	1,274.193548	-209.023684	1,100.000000	-209.023684	

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Table 2: Loan Accounts, Withdrawals Outstanding, and Borrowers' Indebtedness Sub-Accounts

(Amounts in U.S. dollar equivalents)

	POOL	LOAN 3001			LOAN 3002			LOAN 3003		
	Principal (Revaluation Factor)	Loan Account (1,000.00)	Withdrawals Outstanding Account	Principal Outstanding Account	Loan Account (2,000.00)	Withdrawals Outstanding Account	Principal Outstanding Account (Amortization Adjustment Factor)	Loan Account (3,000.00)	Withdrawals Outstanding Account	Principal Outstanding Account
Day 1										
Opening Balance		1,000.00			2,000.00			3,000.00		
Recalls										
Disbursements	100.000000	-100.00	100.00	100.000000						
Closing Balance	100.000000	900.00	100.00	(100.000000000)	2,000.00		(Loan Share %)	3,000.00		
Day 2	(1.02564103000)			(1.02564103000)						
Opening Balance	102.564103	900.00	100.00	102.564103	2,000.00			3,000.00		
Recalls										
Disbursements	200.000000				-200.00	200.00	200.000000			
Closing Balance	302.564103	900.00	100.00	102.564103 (33.898305180)	1,800.00	200.00	200.000000 (66.101694820)	3,000.00		
Day 3	(0.98826382586)			(1.01360393000)			(0.98826382500)			
Opening Balance	299.013158	900.00	100.00	101.360393	1,800.00	200.00	197.652765	3,000.00		
Recalls										
Disbursements	700.000000				-400.00	400.00	400.000000	-300.00	300.00	300.000000
Closing Balance	999.013158	900.00	100.00	101.360393 (10.146051850)	1,400.00	600.00	597.652765 (59.824313645)	2,700.00	300.00	300.000000 (30.029634505)
Day 4	(1.02222089151)			(1.03612711000)			(1.01822190500)			(1.02222089333)
Opening Balance	1,021.212121	900.00	100.00	103.612711	1,400.00	600.00	610.933142	2,700.00	300.00	306.666267
Recalls										
Disbursements	500.000000				-500.00	500.00	500.000000			
Closing Balance	1,521.212121	900.00	100.00	103.612711 (6.811194150)	900.00	1,100.00	1,110.933142 (73.029469504)	2,700.00	300.00	306.666267 (20.159336280)
Day 5	(1.00638454616)			(1.04274231000)			(1.01638722364)			(1.02874730667)
Opening Balance	1,530.924370	900.00	100.00	104.274231	900.00	1,100.00	1,118.025946	2,700.00	300.00	308.624192
Recalls	-101.638235 a/					-100.00	-101.638235			
Disbursements	300.000000				-200.00	200.00	200.000000	-100.00	100.00	100.000000
Closing Balance	1,729.286135	900.00	100.00	104.274231 (6.029900367)	700.00	1,200.00	1,216.387711 (70.340453577)	2,600.00	400.00	408.624192 (23.629645998)
Day 6	(1.01139815477)			(1.05462765000)			(1.02521023833)			(1.03320438250)
Opening Balance	1,748.996806	900.00	100.00	105.462765	700.00	1,200.00	1,230.252286	2,600.00	400.00	413.281754
Recalls										
Disbursements	100.000000							-100.00	100.00	100.000000
Closing Balance	1,848.996806	900.00	100.00	105.462765 (5.703782973)	700.00	1,200.00	1,230.252286 (66.536203957)	2,500.00	500.00	513.281754 (27.760013015)
Day 7	(1.01309004262)			(1.06843277000)			(1.03863028417)			(1.04000126800)
Opening Balance	1,873.200253	900.00	100.00	106.843277	700.00	1,200.00	1,246.356341	2,500.00	500.00	520.000634
Recalls										
Disbursements	500.000000				-200.00	200.00	200.000000	-300.00	300.00	300.000000
Closing Balance	2,373.200253	900.00	100.00	106.843277 (4.502075915)	500.00	1,400.00	1,446.356341 (60.945398062)	2,200.00	800.00	820.000634 (34.552525981)
Day 8	(1.01489339846)			(1.08434536000)			(1.04849821643)			(1.04026653875)
Opening Balance	2,408.545270	900.00	100.00	108.434536	500.00	1,400.00	1,467.897502	2,200.00	800.00	832.213230
Recalls										
Disbursements	200.000000							-200.00	200.00	200.000000
Closing Balance	2,608.545270	900.00	100.00	108.434536 (4.156896844)	500.00	1,400.00	1,467.897502 (56.27264815)	2,000.00	1,000.00	1,032.213230 (39.570454915)
Day 9	(1.01249874456)			(1.09789832000)			(1.06160312714)			(1.04511460000)
Opening Balance	2,641.148811	900.00	100.00	109.789832	500.00	1,400.00	1,486.244378	2,000.00	1,000.00	1,045.114599
Recalls	-209.023684 b/								-200.00	-209.023684
Disbursements										
Closing Balance										

a/ Maturity of \$100.00 on Loan 3002; B345.57 (\$101.638235 equivalent) recalled.

b/ Maturity of \$200.00 on Loan 3003; B794.29 (\$209.023684 equivalent) recalled.

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Table 3.1: Daily and Cumulative Revaluation Factors,
Opening Balances of Withdrawals, and Principal Outstanding

Period I
(All amounts in U.S. dollar equivalents)

	Carried Over	Day 1	Day 2	Day 3	Day 4	Day 5 Recalls	Principal Outstanding	Withdrawals Outstanding	Amortization Adjustment Factor
I. Central Disbursement Account:									
<u>Daily and Cumulative Revaluation Factors</u>									
Day 2		1.02564103000							
Day 3		1.01360392827	0.98826382586						
Day 4		1.03612711119	1.01022392912	1.02222089151					
Day 5		1.04274231256	1.01667375043	1.02874730798	1.00638454616				
II. Borrowers' Accounts: Opening Balances									
A. Loan 3001									
1. Withdrawals		100.00	-	-	-	-			
2. Principal									
Day 2		102.564103					102.564103	100.00	1.02564103000
Day 3		101.360393					101.360393	100.00	1.01360393000
Day 4		103.612711					103.612711	100.00	1.03612711000
Day 5		104.274231					104.274231	100.00	1.04274231000
B. Loan 3002									
1. Withdrawals		-	200.00	400.00	500.00	-100.00			
2. Principal									
Day 2									
Day 3			197.652765	408.888357			197.652765	200.00	0.98826382500
Day 4			202.044786	411.498923	503.192273		610.933143	600.00	1.01822190500
Day 5			203.334750	411.498923	503.192273	-101.638235	1,118.025946	1,100.00	1.01638722364
3. Recalls Day 5							1,016.387711	1,000.00	1.01638771100
C. Loan 3003									
1. Withdrawals		-	-	300.00	-	-			
2. Principal									
Day 2									
Day 3									
Day 4				306.666267			306.666267	300.00	1.02222089000
Day 5				308.624192			308.624192	300.00	1.02874730667
III. All Loans									
1. Withdrawals		100.00	200.00	700.00	500.00	-100.00			
2. Principal									
Day 2		102.564103					102.564103	100.00	1.02564103000
Day 3		101.360393	197.652765				299.013158	300.00	0.99671052667
Day 4		103.612711	202.044786	715.534624			1,021.212121	1,000.00	1.02121212100
Day 5		104.274231	203.334750	720.123116	503.192273	-101.638235	1,530.924370	1,500.00	1.02061624667
3. Recalls Day 5							1,429.286135	1,400.00	1.02091866786

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**Table 3.2: Daily and Cumulative Revaluation Factors,
Opening Balances of Withdrawals, and Principal Outstanding**

Period II

(All amounts in U.S. dollar equivalents)

	Carried Over	Day					Day 9 Recalls	Principal Outstanding	Withdrawals Outstanding	Amortization Adjustment Factor
		Day 5	Day 6	Day 7	Day 8	Day 9				
I. Central Disbursement Account:										
<u>Daily and Cumulative Revaluation Factors</u>										
Day 6		1.01139815477								
Day 7		1.02463739972	1.01309004262							
Day 8		1.0398973279	1.02817839630	1.01489339846						
Day 9		1.05289514892	1.04102933344	1.02757829180	1.01249874456					
II. Borrowers' Accounts: Opening Balances										
A. Loan 3001										
1. Withdrawals	100.00	-	-	-	-	-				
2. Amortization Adj. Factor Day 5	1.04274231000									
3. Principal										
Day 6	105.462765	-	-	-	-	-	105.462765	100.00	1.05462765000	
Day 7	106.843277	-	-	-	-	-	106.843277	100.00	1.06843277000	
Day 8	108.434536	-	-	-	-	-	108.434536	100.00	1.08434536000	
Day 9	109.789832	-	-	-	-	-	109.789832	100.00	1.09789832000	
B. Loan 3002										
1. Withdrawals	1,000.00	200.00	-	200.00	-	-				
2. Amortization Adj. Factor Day 5	1.01638771100									
3. Principal										
Day 6	1,027.972655	202.279631	-	-	-	-	1,230.252286	1,200.00	1.02521023833	
Day 7	1,041.428861	204.927480	-	-	-	-	1,246.356341	1,200.00	1.03863028417	
Day 8	1,056.939276	207.979547	-	202.978680	-	-	1,467.897503	1,400.00	1.04849821643	
Day 9	1,070.149690	210.579030	-	205.515658	-	-	1,486.244378	1,400.00	1.06160312714	
C. Loan 3003										
1. Withdrawals	300.00	100.00	100.00	300.00	200.00	-200.00				
2. Amortization Adj. Factor Day 5	1.02874730667									
3. Principal										
Day 6	312.141938	101.139815	-	-	-	-	413.281753	400.00	1.03320438250	
Day 7	316.227890	102.463740	101.309004	-	-	-	520.000634	500.00	1.04000124800	
Day 8	320.937598	103.989773	102.817840	304.468020	-	-	832.213231	800.00	1.04026653875	
Day 9	324.948915	105.289515	104.102933	308.273488	202.499749	-209.023684	1,045.114600	1,000.00	1.04511460000	
4. Recalls Day 9							836.090916	800.00	1.04511364500	
III. All Loans										
1. Withdrawals	1,400.00	300.00	100.00	500.00	200.00	-200.00				
2. Amortization Adj. Factor Day 5	1.02091866786									
3. Principal										
Day 6	1,445.577360	303.419446	-	-	-	-	1,748.996806	1,700.00	1.02882165059	
Day 7	1,464.500029	307.391220	101.309004	-	-	-	1,873.200253	1,800.00	1.04066680722	
Day 8	1,486.311411	311.969320	102.817840	507.446699	-	-	2,408.545270	2,300.00	1.04719359565	
Day 9	1,504.888438	315.868545	104.102933	513.789146	202.499749	-209.023684	2,641.148811	2,500.00	1.05645952440	
4. Recalls Day 9							2,432.125127	2,300.00	1.05744570739	

The Currency Pooling System

Table 4.1: Interest

Period I

(Amounts in U.S. dollar equivalents)

	<u>Day 1</u>		<u>Day 1</u>	<u>Day 2</u>	<u>Day 3</u>	<u>Day 4</u>	<u>Total</u>
	<u>Opening Balances</u>	<u>Withdrawals</u>					
	<u>Charge Number</u>						
<u>I. Borrowers' Accounts</u>							
<u>A. Loan 3001</u>							
1. Brought Forward	417.096925	100.00					
2. Withdrawals			100.00				
3. Cumulative Revaluation Factor, Day 5	1.01200514892	1.01785821377	1.04274231256				
4. Number of days	4	4	4				
5. Cumulative interest charge number, Day 5	439.159325	439.159325	417.096925				417.096925
<u>B. Loan 3002</u>							
1. Brought Forward	-	1,200.00					
2. Withdrawals			200.00	200.00	400.00	500.00	
3. Cumulative Revaluation Factor, Day 5		1.07014007176	1.05209514892	1.01667375043	1.02874730798	1.00638454616	
4. Number of days		4	4	3	2	1	
5. Cumulative interest charge number, Day 5		1,200.992766	610.004250	822.997846	503.192273		1,936.194369
<u>C. Loan 3003</u>							
1. Brought Forward	617.248385	100.00					
2. Withdrawals			100.00	100.00	300.00	300.00	
3. Cumulative Revaluation Factor, Day 5	1.05209514892	1.00319304885	1.04274231256	1.01667375043	1.02874730798	1.01149374456	
4. Number of days	4	4	4	3	2	1	
5. Cumulative interest charge number, Day 5	618.097830	1,299.793400	617.248385	822.997846	617.248385	303.497761	617.248385
<u>II. All Loans</u>							
1. Brought Forward	1,034.345310	1,200.00	300.00	150.00	300.00	200.00	
2. Withdrawals			100.00	200.00	700.00	500.00	
3. Cumulative Revaluation Factor, Day 5	1.05209514892	1.07490071387	1.04274231256	1.01667375043	1.02874730798	1.000638454616	
4. Number of days	4	4	4	3	2	1	
5. Cumulative interest charge number, Day 5	1,069.037129	1,010.992762	417.096925	610.004250	1,440.246231	503.192273	2,970.539679

g/ (Adjustment Factor, Day 5) = (Cumulative Revaluation Factor for Day 5 on Day 5)

The Currency Pooling System

Table 4.2: Interest

Period II

(Amounts in U.S. dollar equivalents)

	Day 5		Day 5	Day 6	Day 7	Day 8	Total
	Opening Balances						
	Charge Number	Withdrawals					
I. Borrowers' Accounts							
A. Loan 3001							
1. Brought Forward	417.096925	100.00					
2. Withdrawals							
3. Cumulative Revaluation Factor, Day 9	1.05289514892	1.09789831977 <u>a/</u>					
4. Number of days	1	4					
5. Cumulative interest charge number, Day 9	439.159329	439.159328					878.318657
B. Loan 3002							
1. Brought Forward	-	1,000.00					
2. Withdrawals			200.00		200.00		
3. Cumulative Revaluation Factor, Day 9		1.07014969139 <u>a/</u>	1.05289514892		1.02757829180		
4. Number of days		4	4		2		
5. Cumulative interest charge number, Day 9		4,280.598766	842.316119		411.031317		5,533.946202
C. Loan 3003							
1. Brought Forward	617.248385	300.00					
2. Withdrawals			100.00	100.00	300.00	200.00	
3. Cumulative Revaluation Factor, Day 9	1.05289514892	1.08316304865 <u>a/</u>	1.05289514892	1.04102933344	1.02757829180	1.01249874456	
4. Number of days	1	4	4	3	2	1	
5. Cumulative interest charge number, Day 9	649.897830	1,299.795658	421.158060	312.308800	616.546975	202.499749	3,502.207072
II. All Loans							
1. Brought Forward	1,034.345310	1,400.00	300.00	100.00	500.00	200.00	
2. Withdrawals							
3. Cumulative Revaluation Factor, Day 9	1.05289514892	1.07492031283 <u>a/</u>	1.05289514892	1.04102933344	1.02757829180	1.01249874456	
4. Number of days	1	4	4	3	2	1	
5. Cumulative interest charge number, Day 9	1,089.057159	6,019.553752	1,263.474179	312.308800	1,027.578292	202.499749	9,914.471931

a/ (Amortization Adjustment Factor, Day 5) x (Cumulative Revaluation Factor for Day 5 on Day 9).

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717/4/22

G. INTERNAL AUDIT

1. The scope of audit of the Internal Auditing Department (IAD) is designed principally to review and evaluate the adequacy and effectiveness of the Bank's systems and internal controls with due regard to the economy and efficiency with which resources are used.

2. The Department reports to the Senior Vice President, Finance. To enhance its independence, the President has authorized the Director IAD, in writing, to have full access to him should he wish to bring any matter to his attention. The Joint Audit Committee of the Board of Directors has also extended this facility to him.

3. An important issue currently being discussed with the Joint Audit Committee (JAC) of the Board of Directors relates to the extent of information to be provided by IAD. The JAC under its terms of reference is required each year to "assess the adequacy and efficiency of IAD's work." To assist it, IAD currently provides its master and annual work programs, a list of reports issued during the year, and two sample audit reports for discussion. In addition, it arranges for one or two briefings in the course of the year. The JAC also receives from the External Auditors, in their Annual Report to the JAC, a statement on the extent of reliance placed by them on IAD's work. At a recent meeting of the JAC, IAD was asked to circulate a list of audit reports issued in CY1980 for the JAC to select a number of reports for review, possibly by a sub-committee of Alternate Executive Directors. The issue to be resolved concerns the nature and extent of the review to be provided by the JAC.

