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## B. RESOURCE MANAGEMENT

Section B. 1. Liquid Holdings


#### Abstract

1. The Bank's liquid holdings are one of its major assets. Attention presently is focussed in three areas:


(i) the total amount of liquidity held by the Bank,
(ii) the currency composition,
(iii) redefining the framework for managing the portfolio and, concomitantly, developing a new standard for measuring performance.

## Liquidity Levels

2. At the end of the last fiscal year, the IBRD had close to $\$ 10$ billion in liquid assets, primarily government or governmentguaranteed bonds and commercial bank obligations such as C.D.s and bankers' acceptances. About 75 percent of the liquidity is in US dollars, the rest in some 24 other currencies of which Pounds sterling and Deutsche mark are the most important.
3. Because prefunding of loan commitments would require enormous amounts of liquidity (at present there are $\$ 25.4$ billion in undisbursed commitments) which would have required substantial additional funding, the Bank has adopted a liquidity approach which envisages partial funding of forecast financial requirements.

Specifically, the Bank determines its liquidity based on its net cash needs over the forthcoming three years. For several years, the Bank has been following a policy of gradually reducing its liquidity ratio 1/ to reach $40 \%$ by the end of FY82, down from a peak of $69 \%$ in FY77. Under the proposed FY82 borrowing program, this level will be reached. The table below summarizes the Bank's liquidity position during the period 1975 to 1982.

Liquidity Review 1975-82

| 1975 | 1976 | (As of June 30) |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | $\underline{1978}$ | $\underline{1979}$ | $\underline{1980}$ | $\underline{1981}$ | $\underline{1982}$ |

Liquid Assets a/ (in \$ millions)

Liquidity Ratio(\% of next three years borrowing needs)

Growth in $\begin{array}{llllllllll}\text { Liquid Assets (\%) } & 33.6 & 23.6 & 24.2 & 12.9 & 10.1 & 2.2 & (5.5) & 9.2\end{array}$
a/ Excludes delayed deliveries.
b/ Excludes a borrowing from SAMA of $\$ 402$ million approved but not yet signed.
4. One of the stated purposes of its liquidity is to provide the Bank with flexibility in the timing of its borrowing operations. If bond markets deteriorate, the Bank may draw down liquidity as a substitute for new borrowings, replenishing liquidity when markets

1/ The ratio of liquidity to net cost needs over the next three years.
improve. Thus, for example, liquidity has at present been drawn down to $\$ 8.2$ billion, reflecting constrained access to major markets (Germany and Japan) and the Bank's decision to defer, in anticipation of lower interest rates, some borrowings originally programmed for earlier in the year. However, given the Bank's large and increasing borrowing needs, there may be reduced flexibility to defer borrowings in the future. Some flexibility to change the timing of borrowings within a fiscal year will remain, but the Bank will need to meet its overall borrowing targets each year. Our long range concern is over the increase of unfunded commitments in the face of rising interest rates which have significantly increased the interest rate risk of the Bank.
5. The level of liquidity held by the Bank has been the subject of considerable controversy from time to time, with the discussion centering on two issues. Internally, the issue has been whether the Bank is funding itself adequately. This issue has been the Treasurer's Department's principal concern; it is discussed in further detail in this brief's section on the Bank's borrowings.
6. The second issue has preoccupied the Board; that issue has been the proper balance between maintaining flexibility in borrowing and the cost of carrying liquidity.
7. The way the cost of liquidity is calculated has been the subject of controversy. There are two elements in the discussions--
the profile and trend of market yields, and currency aspects. Two of the methods used for calculating the cost of liquidity are the accounting approach and the total financial return approach. The accounting approach has the advantage of easy application particularly when dealing with total amounts outstanding; the main disadvantage of the accounting approach is that it does not show the effect of changing interest rates on the total financial return of investments and the total financial cost of borrowings. Based on accounting figures across all currencies, the actual investment return for the past six fiscal years exceeded the cost of new borrowings by about 40 basis points.
8. A study covering the period FY74-80 of the financial benefits which could have been derived from long-term US\$ borrowings concluded that the benefits could have ranged from $+1.3 \%$ per annum for borrowings in 1974 to $+12.8 \%$ per annum for borrowings in 1979. The main reason for this result is a general rising trend in interest rates.
9. As for the currency aspects, in the past the Bank borrowed relatively "hard" low interest rate currencies and immediately disbursed them (in most cases as a precondition for the issue). "Softer" currencies with high nominal yields tended to be retained in its short-term portfolio (see paragraph 9). This practice contributed to the positive results that the Bank achieved in its liquidity
management over the period. As the Bank's borrowing grows, avoiding borrowings in high nominal cost currencies will be increasingly difficult, so that the pattern of the past six years might not repeat itself. For FY82, for example, the Treasurer's Department estimates that the cost of borrowing will be $10.7 \%$ (weighted by amount), and that the return on liquid assets will be only $9.75 \%$ (i.e., an accounting cost of carrying liquidity of 95 basis points).

## Currency Composition of Liquid Portfolio

10. The Bank attempts to borrow the currencies which will minimize the exchange-rate adjusted interest cost to the Bank and its borrowers taken together. Once a given currency cocktail is borrowed, the Bank must decide which currencies to disburse on loans and which to add to liquid assets. As a matter of practice, the Bank has tended to quickly disburse the proceeds of borrowings in low nominal rate currencies such as $D M$ and Swiss francs and to maintain its investments in high nominal interest rate currencies, especially U.S. dollars and Pounds sterling. (In most cases, the rapid disbursement of borrowing proceeds was a precondition for access to the "hard" currency markets.) I/ While this practice had caused some criticism in previous years because of the appreciation of the then strong currencies

[^0]disbursed on loans, this practice has proved beneficial in recent years to both borrowers and the Bank for the reasons set out below.
11. The Bank's lending rate is based on the average cost of all the currencies actually borrowed. The currency composition of investments and disbursements has attracted Board interest and comment from time to time. In particular, it has been asked why the currency compositions of loans and of investments are so different, while some borrowers have asked specifically that more dollars be disbursed on loans. $1 /$ At the moment, considering the strength of the dollar, these comments have practically disappeared as borrowers realize that they have benefitted from a low nominal lending rate and that their repayment obligations on past "hard" currency disbursements have become smaller in US\$ terms.
12. Changing present disbursement practices could introduce substantial swings in accounted income. It is not clear that it is in the interest of IBRD's borrowers to have such volatility. Moreover, all Bank earnings redound directly or indirectly to the benefit of the borrowers and it is wrong to think in terms of the Bank benefitting at

[^1]the borrowers' expense. As a practical matter, projected net income is not so robust that the Bank could afford to forgo the income it gains from disbursing otherwise uninvestable currencies first, then other currencies in sequence of their investment return, without seriously considering increasing the spread between borrowing cost and lending rate.

## Managing the Portfolio

13. Increasing attention is being directed internally toward redefining guidelines for managing the Bank's portfolio and developing a new standard for measuring its performance. The objective for managing the Bank's investment portfolio has evolved over time. Prior to 1972 a buy-and-hold strategy prevailed. When active portfolio management was initiated, a specific market portfolio representing the investment vehicles authorized for purchase by the Bank was used as a standard for investment strategy and performance measurement. In addition, a target for net income expressed in terms of book return on liquid assets was used. In the last 2 years, however, the interest rate risk facing the Bank increased at an unprecedented rate and we searched for a new investment objective to counteract that trend. The main reasons for the increase in the interest rate risk are (a) the growth of loan commitments at fixed rate, that are not immediately funded and (b) the high volatility of interest rates and their rising trend.
14. Recently a study was commissioned by the Bank to determine the portfolio of liquid assets that would minimize the overall financial risk of the Bank, in particular, the interest rate risk. The study concluded that the theoretically ideal maturity for the Bank's liquidity was very short. As a result, the Treasurer's Department has established the guideline that the average maturity should adhere to a 6-month "norm" unless there is a high probability of a significant gain to be made by deviating from the norm.
15. With the introduction of the "norm", we are developing a norm index that will be used as a standard of performance for the management of the portfolio. We are in the process of gradually implementing this norm into the portfolio management. However, accounting income constraints presently are in the way of immediately completing implementation. While in principle the investment managers seek to maximize the risk-adjusted rate of return on the portfolio, targets for net income inhibit that goal 1/

1/ The Bank carries its liquid assets at cost on its balance sheet, and "books" as income gains and losses which have been realized. Thus, the difference between "book" return and total financial return (which reflects current market prices) can be substantial. The table below compares "book" and financial returns at recent reporting dates.

Return on Liquid Portfolio (through March 31, 1981)

Book Return
Financial Return
(annualized)

Fiscal Year to Date Preceding 12 months
9.12\%
9.41\%
2.64\%
13.98\%
-

## Section B.2: Loans

1. Most of the issues concerning the management of the IBRD and IDA loan portfolios are operational in character and are accordingly taken $u p$ in the briefing materials prepared by the operating staff. There are, however, two issues which have an important financial dimension:

- Management of country risk. The issue is whether the IBRD is satisfactorily protected against country risk in .its loan portfolio.
- Management of loan maturities. The average maturity of new IBRD loan commitments was shortened in the late 1970s in order to permit a higher level of commitments to be sustained on a given capital base. The issue is whether-- as some Part II countries maintain--this shortening of loan maturities should be reversed once the General Capital Increase is subscribed.

Management of Country Risk
2. The IBRD's management of country risk is not guided by the same risk/reward considerations that influence commercial lenders. Interest rates in the IBRD are the same for all borrowers, so there is no extra financial return to compare with the additional risk of lending to a less creditworthy country. Moreover, the notion of risk in the IBRD's case is difficult to define precisely. The IBRD has
never had a loss and it maintains a very firm policy against participation in re-schedulings. The single most likely outcome for the future is that the IBRD will experience no loss at all. Yet there is no doubt some risk that existing policy will be violated. The problem is to assess that risk and to determine whether the IBRD's financial structure provides adequate protection against it.
3. There are several ways in which the IBRD tries to avoid excessive country risk. The first line of defense is simply not to lend if the borrowing country looks as though it won't be able to repay. This judgment is made by senior management in the context of the reviews of country assistance programs. (This process is described in the operational briefing materials.) The second line of defense is to diversify IBRD exposure among countries so that if a default is experienced in any one country, its consequences for the IBRD's financial position will be bearable. As the following table shows, the 10 largest IBRD borrowers now account for about $62 \%$ of the total portfolio, but this proportion is expected to decline over the next few years. Current projections of the IBRD's retained earnings--which we label as "General Reserve"--average $11-12 \%$ of disbursed and outstanding loans over the next decade.

IBRD: Portfolio Shares of the 10 -Largest Borrowers

|  | $1980$ <br> Actual | 1985 |  |  | 1990 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Scenario |  |  | Scenario |  |  |
|  |  | A | B | C | A | B | C |
| Brazil | 10.81 | 8.4 | 8.2 | 8.5 | 9.1 | 8.2 | 9.0 |
| Mexico | 10.52 | 6.5 | 6.2 | 6.5 | 5.4 | 4.7 | 5.3 |
| Korea | 8.63 | 5.5 | 5.6 | 5.9 | 5.3 | 5.3 | 6.0 |
| Yugoslavia | 6.83 | 3.9 | 3.7 | 3.9 | 3.0 | 2.6 | 2.9 |
| Turkey | 5.10 | 4.7 | 4.9 | 5.1 | 4.7 | 4.8 | 5.5 |
| Colombia | 4.92 | 4.3 | 4.2 | 4.4 | 4.6 | 4.0 | 4.5 |
| Indonesia | 4.42 | 6.5 | 6.3 | 6.6 | 8.3 | 7.4 | 8.2 |
| Philippines | 4.10 | 5.1 | 5.3 | 5.5 | 5.5 | 5.5 | 6.1 |
| India | 3.89 | 3.2 | 3.3 | 3.3 | 3.4 | 4.1 | 3.4 |
| Romania | 3.44 | 2.7 | 2.6 | 2.7 | 2.4 | 2.1 | 2.4 |
| China | - | - | 1.0 | 1.0 | - | 5.4 | 6.8 |
| Subtotal | 62.39 | 50.8 | 51.3 | 53.4 | 51.7 | 54.1 | 60.1 |
| All Others | 37.61 | 49.2 | 48.7 | 46.6 | 48.3 | 45.9 | 39.9 |
| Total | 100.00 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

N.B. Please note that these figures were prepared in connection with the discussion of possible expansion in IBRD/IDA Lending. Scenario A is our current lending plan excluding China and expanded energy lending. Scenario $B$ is an expanded program including both China and additional energy lending. Scenario C includes China but excludes all energy lending.
4. The third line of defense is to limit lending to any given country so as to prevent debt service due the IBRD from exceeding 20$\mathbf{2 5 \%}$ of the country's total debt service. The purpose of this practice--which is subject to exception if good cause is shown--is to ensure that the IBRD is not caught in a situation where, if a rescheduling were to occur, it would be unrealistic for it to stand aside.
5. Fourth and finally, the financial staff of the Bank periodically re-assess the overall loan portfolio on the artificial assumption that the policy against re-scheduling is no longer in effect. By examining the balance of payments risks and short- to medium-term adjustment capacity of each IBRD borrower, the staff evaluate the likelihood of circumstance requiring a debt re-scheduling and the degree of debt relief that would be needed to restore a viable balance of payments position. In the event some degree of concessionality would be required, it is assumed that the IBRD's income would be affected pro rata. While these calculations are subject to a great deal of arbitrariness and subjective judgment, they give a rough and ready measure of the changes over time in the underlying country risk the IBRD is accepting. What the calculations show is a rather steady increase in the aggregate country risk accepted by the IBRD.
6. The calculations do not shed much light on the more fundamental question of whether the IBRD has the financial strength to prudently accept a higher level of country risk than is implicit in its current lending pattern. There has been some concern expressed in the Board--especially by the German Director--that the IBRD may be at or near prudent limits, but so far the issue has not aroused a great deal of interest. While our underwriters report a fair amount of anxiety on the part of investors with regard to the "LDC debt problem", their anxiety has so far had no perceptible impact on the
maketability of IBRD bonds or the yield spread vis-a-vis government obligations.

## Loan Maturites

7. In 1977, faced with a constraint of capital, the Bank decided to stiffen the terms of repayment of its loans substantially in order to sustain a higher level of lending. 1/ Repayment terms were hardened both in the method of amortization (from annuity to equal payments of principal) and through a shortening of the grace period and final maturity. The understanding at that time was that the matter would be reviewed after the General Capital Increase was implemented.
8. The overall weighted average terms in effect immediately prior to the 1977 decision were 4.3 years' grace and 20.6 years' final maturity, with amortization of principal through the annuity method. The average terms now in effect are 3.9 years' grace and 17.2 years' final maturity, with loans amortized through equal payments of principal. Some distinction is made between high, middle and low income borrowers in the matter of grace periods and final maturities, as shown in the table below:

1/ A relaxation of repayment terms results in a higher level of loans disbursed and outstanding; consequently, for a given amount of capital, the statutory limit on lending implies a trade-of $f$ between relaxed terms and a lower volume of lending.

## FY81 IBRD Terms of Lending

|  | Weighted Average (years) |  |
| :---: | :---: | :---: |
| Income Group | Grace Period | Final Maturity |
| High | 3.0 | 15.0 |
| Middle | 4.0 | 17.0 |
| Low | 5.0 | 20.0 |
| . IBRD Average | 3.9 | 17.2 |

9. The Bank's current repayment terms are regarded as burdensome by many of its borrowers, and there is strong support in the Board among the Part II Directors for a relaxation now that the GCI seems reasonably assured. However, our analysis shows that any relaxation large enough to offer significant relief to borrowers would imply an unacceptable reduction in the "sustainable" lending levels. The Part I Directors have consistently opposed any substantial relaxation for this reason. There is some evidence that the Part II Directors are also coming round to this point of view: the December memorandum on expansion in IBRD/IDA lending explicitly assumed that repayment terms would not be relaxed, and evoked no objection in the Board.

Reference Documents
B.2.01 Board Memo on IBRD Lending Terms for FY81
B.3.02 Section 3 from the Board memorandum on Means of Financing (December 1980), which discusses the adequacy of the Bank's projected income and reserves.

# International Bank for Reconstruction and Development International Development Association 

FOR OFFICIAL USE ONLY

For consideration on January 15, 22 and 27, 1981

R80-356
IDA/R80-169
FROM: Vice President and Secretary
December 19, 1980

AN EXAMINATION OF POSSIBLE EXPANSION OF IBRD/IDA LENDING OVER LEVELS PRESENTLY PLANNED FOR FY82-86 AND MEANS OF

FINANCING SUCH EXPANSION
Attached hereto is a copy of the President's memorandum entitled "An Examination of Possible Expansion of IBRD/IDA Lending over Levels Presently Planned for FY82-86 and Means of Financing Such Expansion" dated December 18, 1980.

This document also includes the President's memorandum "Possible Expansion of IBRD/IDA Lending Over Presently Planned Levels" distributed on November 14, 1980 under R80-325(IDA/R80-149).

Questions on this document should be referred to Mr. D. J. Wood (extension 75837).

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## Section 3: Paid-In Capital

18. The other type of budgetary outlay which might be needed to support an expanded lending program is paid-in capital. This could either take the form of subscriptions to IBRD capital above and beyond the General Capital Increase or subscriptions to $a$ new and separately-capitalized Energy Affiliate. A requirement for additional paid-in capital could arise from a need for an added margin of protection against potential loan losses or from the need for more cost-free resources to bolster net income prospects. This section considers each of these possibilities in turn.

## Margin of Protection Against Loan Losses

19. In the more than 30 years of its operations the Bank has never suffered a loss on its loans. There is thus no basis for determining any specific reserve against loan losses. While in the early years of Bank operations a $1 \%$ loan commission was set aside in a Special Reserve to be held for the purposes of meeting liabilities of the Bank on its borrowings and guarantees, the Board of Governors discontinued this practice for new loans in 1964. All IBRD net income retained in the business has been added to a General Reserve. The rationale for adding to this General Reserve has been expressed in various ways. Fundamentally, its purpose is to ensure that in the event of loss, the total of the IBRD's assets would still exceed the IBRD's obligations to creditors. Hence, provided the Bank could continue to borrow, there would be no need for it to call upon shareholders capital subscriptions in order to meet its debt obligations.
20. The part of paid-in capital which has been released for use in operations also adds to the margin of protection against loan losses. The two elements--the General and Special Reserves and the released portion of paid-in capital--have frequently been combined into one total called "usable equity." The review of IBRD financial policies conducted in late 1974 expressed the target for protection against loan losses as a ratio between usable equity and disbursed loans. The tentative conclusion reached was that usable equity in the range of $10 \%$ to $15 \%$ of disbursed loans should offer ample protection against loan losses, though this conclusion was subject to review on the basis of a closer look at the quality of the loan portfolio. 1/ The results of that review were summarized in a detailed examination of the Bank's capital structure presented several months later. 2/

Review of IBRD Financial Policies, R74-256, dated December 11, 1974, paras. 34-41.
2/ Review of IBRD Capital Structure, R75-215, dated November 5, 1975, paras. 57-70.

The more detailed analysis drew a sharp distinction between (a) the margin of protection necessary to assure shareholders that there would be no call on the unpaid portion of their capital subscriptions to make good on loan losses, and (b) the margin necessary to maintain bondholder confidence and avoid interruption in the IBRD borrowing program. Adequate protection against the former risk was judged to require usable equity in the range of $4 \%$ to $8 \%$ of disbursed loans plus liquid holdings, whereas it was thought bondholder confidence could require a level of usable equity of as much as $15 \%$ depending on the perceptions of bondholders and rating agencies with respect to the backing the Bank has from governments whose guarantees are highly valued in the market.
21. More recent discussions of the IBRD's usable equity and reserve position have recognized that paid-in capital and retained earnings are not very important to the creditors assessment of the financial soundness of the Bank. Creditors may be expected to look at total capital--of which paid-in capital and reserves are only a quite small part--for protection against loan losses. Shareholders, on the other hand, want reserves to be sufficient to ensure that their capital will not be impaired. Additions to the General Reserve amounting to $8 \%$ to $10 \%$ of the annual increase in disbursed loans has been used as a benchmark to meet that objective, though there has been no discussion in depth or Board approval of this range 1/. The experience of other financial institutions would seem to suggest that this range is, if anything, more than ample.
22. It is against this background that the following table summarizes the outlook for IBRD reserve accumulation under three sets of assumptions. ${ }^{2 /}$

1/ Uses of Bank Income and Allocations of FY80 Net Income, R80-204, dated July 10, 1980.
2/ The detailed assumptions underlying these projections are stated in the attached Annex Tables \#1, 非2, and \#3. The IBRD commitment levels are as follows (in $\$ \mathrm{~b}$ ):

|  | $\underline{\text { FY82 }}$ | $\underline{\text { FY83 }}$ | $\underline{\text { FY84 }}$ | $\underline{\text { FY85 }}$ | $\underline{\text { FY86 }}$ | Total <br>  <br>  <br> Scenario A |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| 9.6 | 10.7 | 11.9 | 13.2 | 14.6 | 60.1 |  |
| Scenario B | 13.0 | 15.5 | 19.0 | 21.6 | 24.7 | 93.8 |
| Scenario C | 9.7 | 11.6 | 13.4 | 15.6 | 18.1 | 68.4 |
| - IBRD | $\underline{3.3}$ | $\underline{3.9}$ | $\underline{5.6}$ | $\underline{6.0}$ | $\underline{6.6}$ | $\underline{\underline{25.4}}$ |
| - Energy | $\underline{\underline{13.0}}$ | $\underline{\underline{15.5}}$ | $\underline{\underline{19.0}}$ | $\underline{\underline{21.6}}$ | $\underline{\underline{24.7}}$ | $\underline{\underline{93.8}}$ |

Scenario A: the current program as described in the FY81 Budget document;

Scenario B: the IBRD component of the "constrained" program described in Section 2 above (i.e., including $\$ 3.3$ billion in lending shifted from IDA to IBRD terms);

Scenario C: the expanded IBRD program as it would appear if all energy lending other than to "IDA only" countries ( $\$ 25.4$ billion in the FY82-86 period) were financed through a separately capitalized Energy Affiliate.

The outlook under the current program (Scenario A) would seem consistent with even the more conservative of past targets for reserve adequacy. If a separately capitalized Energy Affiliate were to handle all energy lending (Scenario C), the outlook for the IBRD's reserve position falls within established ranges in the next few years, but questions could be raised about the adequacy of reserve accumulation in the latter part of the decade. If, on the other hand, the whole of the expanded program were to be financed within the IBRD, questions could arise at least with respect to the situation later in the decade.

## IBRD Reserve Adequacy: FY82-90

(\$ billion and \%)
FY82 FY83 FY84 FY85 FY86 FY87 FY88 FY89 FY90
Annual Addition to General Reserves

|  | .51 | .52 | .55 | .57 | .60 | .74 | .90 | 1.05 | 1.21 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Scenario A | .47 | .37 | .29 | .18 | .13 | .28 | .44 | .59 | .75 |
| Scenario B | .51 | .46 | .40 | .30 | .25 | .35 | .47 | .59 | .72 |

Total Reserves as
\% of Disbursed Loans
Scenario A
Scenario B
Scenario C

| 12.7 | 12.3 | 11.9 | 11.5 | 11.3 | 11.3 | 11.4 | 11.7 | 12.0 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 12.5 | 11.5 | 10.1 | 8.7 | 7.4 | 6.6 | 6.1 | 5.8 | 5.6 |
| 12.7 | 12.0 | 11.0 | 10.0 | 9.1 | 8.5 | 8.0 | 7.7 | 7.6 |

Usable Equity as \% of Disbursed Loans

Scenario A
Scenario B
Scenario C

| 23.0 | 22.5 | 21.9 | 21.2 | 20.8 | 19.8 | 19.1 | 18.6 | 18.4 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 22.8 | 21.3 | 19.3 | 17.2 | 15.2 | 13.2 | 11.7 | 10.6 | 9.9 |
| 22.9 | 21.9 | 20.6 | 19.2 | 17.9 | 16.1 | 13.6 | 13.7 | 13.0 |

23. The issue to be considered here, however, is not whether the outlook is adequate, but whether the risks are such as to justify an addition to paid-in capital or, failing that, acceptance of a lower level of future IBRD lending. While it is a matter of judgement whether any action at all need be taken to make Scenario C acceptable from the point of view of the Bank's reserve objectives, if action were to be taken, it would almost certainly take the form of a small increase in IBRD lending charges rather than an addition to paid-in capital. The same would be true in Scenario B, though in this Scenario the case for corrective action is obviously much stronger and the required increase in the IBRD lending charges potentially much larger.

## Net Income Prospects

24. The Bank's policy regarding income objectives has changed several times in recent years. In the early 1970s the objective was to have a modest year-by-year increase in the absolute level of net income, starting from a base of approximately \$200 million. In 1974, this objective was revised to take account of the fact that projected "pre-risk" and actual net income could differ. It was then argued that the Bank's net income should be planned so as to have a very high probability of never going negative. In 1976, a "cost-plus" approach was adopted by the Board under which the Bank's net income was to be the level achieved by maintaining a 50 basis point spread between the

Bank＇s average cost of borrowing and its lending rate．Recent consultations with our underwriters confirm the importance of a rising income trend，but cast doubt on the significance of negative income for a single year，particularly if there were a readily identifiable， nonrecurring cause．

25．The following table summarizes the net income projections for each of the three Scenarios considered（detailed assumptions may be found in Annex Tables 非1，非2，and 非3）：

# IBRD's Net Income, Interest on Debt and Interest Coverage ${ }^{\text {a/ }}$ (\$ billion) 

FY82 FY83 FY84 FY85 FY86 FY87 FY88 FY89 FY90

| Net Income | . 61 | . 62 | . 65 | . 67 | . 70 | . 85 | 1.00 | 1.15 | 1.31 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest on Debt | 2.75 | 3.30 | 3.89 | 4.50 | 5.02 | 5.60 | 6.20 | 6.89 | 7.57 |
| Interest Coverage | 1.22 | 1.19 | 1.17 | 1.15 | 1.14 | 1.15 | 1.16 | 1.17 | 1.17 |
| Scenario B |  |  |  |  |  |  |  |  |  |
| Net Income | . 57 | . 47 | . 39 | . 28 | . 23 | . 38 | . 54 | . 69 | . 85 |
| Interest on Debt | 2.96 | 3.90 | 4.90 | 6.04 | 7.20 | 8.48 | 9.88 | 11.49 | 13.16 |
| Interest Coverage | 1.19 | 1.12 | 1.08 | 1.05 | 1.03 | 1.04 | 1.05 | 1.06 | 1.06 |
| Scenario C |  |  |  |  |  |  |  |  |  |
| Net Income | . 61 | . 56 | . 50 | . 40 | . 35 | . 45 | . 57 | . 69 | . 82 |
| Interest on Debt | 2.85 | 3.59 | 4.37 | 5.22 | 6.02 | 6.90 | 7.86 | 8.96 | 10.09 |
| Interest Coverage | 1.21 | 1.16 | 1.11 | 1.08 | 1.06 | 1.07 | 1.07 | 1.08 | 1.08 |

Memo Item: Interest Rate Assumptions

| Scenario A | FY82 | FY83 | FY84 | FY85 | FY86 <br> and After |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Double weighted borrowing cost | 10.00 | 10.00 | 9.50 | 9.00 | 8.50 |
| Single weighted borrowing cost | 9.75 | 9.75 | 9.25 | 8.75 | 8.25 |
| Return on liquid assets | 9.35 | 9.35 | 8.85 | 8.35 | 7.85 |
| Lending Rate b/ | 10.50 | 10.50 | 10.00 | 9.50 | 9.00 |
| Scenarios B and C |  |  |  |  |  |
| Double weighted borrowing cost | 10.50 | 10.50 | 10.00 | 9.50 | 9.00 |
| Single weighted borrowing cost | 10.25 | 10.25 | 9.75 | 9.25 | 8.75 |
| Return on liquid assets | 9.50 | 9.50 | 9.00 | 8.50 | 8.00 |
| Lending Rate b/ | 11.00 | 11.00 | 10.50 | 10.00 | 9.50 |

a/ Projections of net income and its component parts, in a period of highly volatile financial markets as at present, are subject to wide margins of error.
$\underline{b} /$ The borrowing programs for $\underline{B} \& \underline{C}$ assume a much higher percentage of borrowing in "soft" high-interest rate cürrencies and this leads to a higher lending rate and lower exchange risk to the developing country borrower.
26. In evaluating the net income projections, it is important to recall the income risks which the IBRD faces. They fall into three categories: (a) unanticipated reductions in income from loans; (b) higher than projected administrative expenses; and (c) unfavorable and unforeseen movements in market interest rates. Past reviews of these income risks have given substantial weight to the first type of risk, even though the likelihood of this risk materializing in practice was thought to be quite small. On the other hand, the risk associated with unanticipated adverse movements in interest rates appeared relatively less important, partly because the situations used to illustrate the impact of such adverse movements assumed only a modest (100 basis point) shift in rates.
27. Our current assessment is that this emphasis should be reversed, that less weight should be given to reductions in loan income and more to interest rate risks. Both the level and volatility of interest rates have increased substantially since the last review of interest rate risk and, in addition, the IBRD's more highly leveraged capital structure under the expanded scenarios will expose it to more of these risks. The net income projections should thus be seen as subject to fluctuation mainly on the basis of interest rate developments different from those assumed in the projections.
28. The issue here, as in the case of the Bank's reserve objective, is whether the outlook for net income is such as to require an addition to paid-in capital or, failing that, acceptance of a reduced level of future IBRD lending. As before, Scenario A would not appear to pose any great difficulty, whereas some action might be needed to strengthen Scenarios $B$ and $C$ in order to make them more attractive. The actions which might be taken are of two kinds: (a) steps to increase the IBRD's own capacity to carry the risk of possible interest rate fluctuations; and (b) steps which would permit the IBRD to pass on more of such risks to the borrowing countries.
29. A decision to increase the IBRD's own capacity to carry the risks would mean finding ways of bolstering planned (or "pre-risk") net income. One way of doing this would be to increase the spread on IBRD lending. However, since the most serious deficiency in the income projection in Scenario B arises between now and FY86, and since an increase in spread has relatively little effect in the near-term, this would not be the most efficient way of dealing with the net income problem. It would be more efficient to increase the loan charges collected in the very early years of the loan. There could be an increase in the commitment charges, for example, or a fee related to project processing costs could be introduced. In principle, net income could also be increased in the near-term through additions to paid-in capital for the IBRD beyond those planned in connection with the General Capital Increase. But there would appear to be virtually
no prospect for obtaining further increases for the IBRD while the General Capital Increase is being subscribed. (The possibility of paid-in capital for the Energy Affiliate is considered separately below (para. 32).)
30. The alternative to bolstering the IBRD's pre-risk net income would be to take steps to minimize the fluctuations in net income, so that it would no longer be necessary to build in such a large cushion to withstand unanticipated and adverse interest rate movements. One way of doing this would be to fix the interest rate on loans at the time of disbursement rather than at the time of commitment. Another would be to provide some degree of adjustability in the interest rates over the life of a loan. Either technique would permit the IBRD's income from loans to react more quickly to changes in interest rates, and thus lessen the potential fluctuations in net income.
31. Given greater assurance that projected net income is in fact likely to be achieved, any new measures to bolster projected net income in Scenario C could be modest in scope. In Scenario B, however, the declining absolute level of net income does not provide a satisfactory basis for the borrowing required to finance the higher IBRD lending program. In this Scenario, therefore, some increase in "front-end" fees would be needed even if steps were taken to pass more of the interest rate risk on to borrowers.

## Paid-In Capital for an Energy Affiliate

32. 

While the IBRD could thus achieve reasonable reserve and income positions through steps other than an injection of additional paid-in capital, the establishment of a separately capitalized Energy Affiliate would require an initial base of cost-free funds to produce an acceptable income position in its early years of operations and to provide some margin of protection to creditors. The financial structure of an Energy Affiliate is still uncertain in many respects. But our preliminary work suggests that paid-in capital of $\$ 1.0$ to $\$ 1.5$ billion, paid in over two or three years, would be needed. In addition, callable capital on the order of $\$ 9$ to $\$ 13.5$ billion may be required. (The callable capital requirements are considered further in Section 5 below.) The detailed financing plans for an Energy Affiliate may be described in a separate memorandum which could be distributed early in the new year.


# International Bank for Reconstruction and Development 

1. Attached hereto is a copy of a memorandum from the President entitled "Grace Periods and Final Maturities of IBRD Loans in FY 80 and FY 81" dated June 30, 1980.
2. In the absence of objection (to be communicated to the Vice President and Secretary or Deputy Secretary by the close of business on July 11, 1980), the recommendations contained in the President's memorandum will be deemed approved, to be so recorded in the minutes of a subsequent meeting.
3. Questions on this document may be addressed to Mr. Applegarth (X75765).

Distribution:<br>Executive Directors and Alternates<br>President<br>Senior Vice President<br>President's Council<br>Vice Presidents, IFC<br>Directors and Department Heads, Bank and IFC

## MEMORANDUM TO THE EXECUTIVE DIRECTORS

Subject: Grace Periods and Final Maturities of IBRD Loans in FY80 and FY81

1. Repayment terms for IBRD loans have been approved annually by the Executive Directors in the last four years. During the discussions of the Selective Capital Increase, it was agreed that repayment terms should be tightened until the General Capital Increase was firmly in hand.
2. The average terms approved for FY80 IBRD loans consisted of 4.1 years grace and 17.6 years final maturity with variations around these overall averages according to the per capital income group of the borrowing country. $1 /$ As shown in Table 1 below, actual terms approved for IBRD loans in FY80 have followed closely the Board guidelines:

## $\frac{\text { Table 1: FY80 IBRD Terms of Lending }}{\text { (years) }}$

| Country Groupings by | Grace Period b/ | Final Maturity |
| :---: | :---: | :---: |
| 1978 GNP Per Capita a/ | Guideline Actual $\frac{\mathrm{c} /}{}$ | Guideline Actual ${ }^{\text {c }}$ |
| Above \$1290 | $3.0 \quad 3.4$ | $15.0 \quad 15.0$ |
| \$626-\$1290 | $4.0 \quad 4.0$ | 17.0 16.8 |
| Below \$626 | $5.0 \quad 5.1$ | 20.019 .5 |
| Overall Weighted Average | 4.14 .2 | 17.617 .1 |

a/ Per capita income groupings are updated annually to reflect the present-year US dollar equivalent of the previous guidelines, and changes of countries within groups.
b/ Grace period is defined as the period from the date of approval of the loan to the date of the first repayment minus six months.
c/ As of May 31, 1980. These figures exclude DFC-type loans. They also exclude loans approved in FY80 for which documents were distributed to the Board before June 30, 1979.

[^2]
## Guidelines for FY81

3. The Board has indicated it wishes no change in the present guidelines for repayment terms until further progress has been made on the GCI. We, therefore, plan to process IBRD loans in FY81 on that basis.
4. Even though the current pattern of grace periods and repayment terms has not caused serious problems in general, some difficulties have been encountered in particular projects and countries. To the extent possible, the Bank has tried to move away from the rigid application of the guidelines by balancing softer terms on one project within a country with harder terms on another or by increasing the grace period and simultaneously shortening the final maturity on the same project. In some cases, however, this has not been possible either because there were not enough loans in the same country or because the projects themselves did not allow it. As a result, there have been a number of projects where scheduled repayment dates have occurred before any disbursements were made. In these cases, the Bank has taken appropriate steps to amend the loan amortization schedules. However, to reduce the number of occasions when amendments are necessary, the Bank is increasing each operating region's flexibility to adjust the terms of individual projects within a country, so long as the average lending terms to the country are maintained. When a country's lending program is too small to permit adjustments within the country, the Bank will look to accomodate the adjustment within Bank-wide averages.

B.3.01 Board memorandum reviewing IBRD lending rate policy and proposing the policy currently in force.

For consideration
July 10, 1979

R79-167
FROM: Vice President and Secretary June 15, 1979

REVIEW OF IBRD LENDING RATE POLICY

Attached is a memorandum entitled "Review of IBRD Lending Rate Policy" dated June 14, 1979, from the President.

Questions on this document may be referred to Mr. Paul Applegarth
(extension 76262).

## Distribution:

Executive Directors and Alternates
President
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Vice President, Operations
President's Council

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## MEMORANDUM TO THE EXECUTIVE DIRECTORS

## SUBJECT: Review of IBRD Lending Rate Policy

## Section I: Introduction

1. The Bank's present lending rate policy, which has been in effect since July 1976, is based on a formula whereby the rate is changed each quarter so as to maintain a $0.5 \%$ spread over the "normalized" borrowing cost during the preceding 12 months. $1 /$ In the three years that the formula has been in operation, the rate has changed each quarter, declining from a high of $8.90 \%$ in the first quarter of FY 77 to a low of $7.00 \%$ in the third quarter of FY79.2/ It presently stands at $7.90 \%$. The largest one-quarter change in the rate has been in the most recent period when the rate was increased by 90 basis points. While the formula has aimed for a $0.5 \%$ spread over "normalized" borrowing costs, the spread over actual borrowing costs has been $0.80 \%$ in FY77, $0.61 \%$ in FY78 and $1.44 \%$ in FY79.
2. 

Both the somewhat erratic behavior of the lending rate and the excessively large divergence between actual and "normalized" borrowing costs could in principle be reduced by technical adjustments to the formula, particularly in the way the cost base is calculated. When the present formula was introduced, however, it was understood to be a temporary measure, pending a more detailed review of the Bank's income requirements and lending rate policy. This review was deferred due to the deliberations on the General Capital Increase and because the present formula produced broadly acceptable results during FY77 and FY78. A review of IBRD lending rate policy should not be further postponed, however. The purpose of this paper is to provide the basis for such a review.
3. need to be addressed: first, should the Bank make a change in its basic policy of offering borrowers a rate fixed for the life of the loan? Second, should the Bank determine the rate on the basis of a formula or by ad hoc reviews of income requirements?

1/ The calculation of the "normalized" cost of borrowing is described in Attachment 1.
2/ Actual lending rates by quarter over the last three years are shown in Attachment 2.
4. The answer to the first issue depends primarily on the nature of the risks faced by the Bank and whether it is still possible for the Bank to bear the interest rate and other risks inherent in fixed-rate lending. Our review leads us to conclude that it is prudent for the Bank to continue to bear these risks and therefore we recommend continuation of the policy of fixing the rate on each loan at the time of commitment. It is recommended, however, that the Bank not set the rate on the basis of a formula but establish a general guideline of adjusting the rate once per year (or more frequently as necessary) so as to maintain a spread of approximately 50 basis points above a twelve-month borrowing cost.
5.

The basis for each of these recommendations is set out below. Section II describes the nature of the income risks faced by the Bank with fixed-rate lending. Section III analyzes how these risks might be reduced or dealt with better through a change in the Bank's lending rate policy. Section IV discusses the advantages and disadvantages of formula versus discretionary approaches to determining the Bank's lending rate. $1 /$

## Section II: IBRD Income Risks

6. The risks to IBRD income were last analyzed in detail in the 1974 Review of Financial Policies. ${ }^{/}$/ These risks were reviewed again in the Capital Structure Paper, at which time they were re-expressed as a percentage of interest on borrowings (i.e., as a target for the interest coverage ratio) and related to a more detailed analysis of the Bank's reserve requirements. 3 / The approach in both these reviews was to establish "pre-risk" targets for net income based on an assessment of the potential differences between actual net income and the amount projected in advance. The idea was to have a "pre-risk" or projected net income that was sufficiently high to withstand negative variations and still yield a positive actual result. The main sources of uncertainty were identified as loan reschedulings and defaults, changes in interest rates, and inflation in administrative expenses.
7. 

Following this same approach, we have again made a detailed review of the Bank's income risks. The conclusion which emerges from this review is that the range of income targets established previously is still valid.

1/ For background purposes, Annex A gives a brief history of the Bank's lending rate policy.
2/ Review of IBRD/IDA Program and Financial Policies (R74-256, dated December 12, 1974).
3/ Review of IBRD Capital Structure (R75-215, dated November 5, 1975).

## A. Potential Losses of Loan Income

8. Income from loans is projected on the assumption that all principal and interest will be paid as and when due. This is a "best estimate" of loan income in that the Bank's lending program is shaped by creditworthiness considerations and no loans are made unless there is every reasonable expectation that the loan will be repaid in a timely fashion. The risk to the Bank's loan income arises because the circumstances assumed in the "best estimate" of the borrower's ability to repay may not occur, in which case temporary moratoria on debt service payments and/or reschedulings of debt obligations could be required.
9. Temporary Moratoria. The size and tions in debt service payments are virtually impossible to forecast because of the wide variety of circumstances that might give rise to a need for one or more borrowers to suspend payments for some period of time. In past reviews an allowance of $10 \%$ of interest on borrowings has been made reflecting the overall concentration of the Bank's loan portfolio. According to the latest financial projections, nine borrowers will each account for more than $4 \%$ of the Bank's total income from loans in the late 1980s, and three borrowers will account for 7-10\% each.1/ The 10\% allowance for temporary moratoria on debt service represents coverage of a complete cessation of payments for one year by the Bank's single largest borrower, or two or more smaller borrowers at the same time.2/ For this reason, the $10 \%$ allowance for this type of risk continues to be a prudent and conservative measure. It implies a capacity to withstand temporary shortfalls in projected loan income in the FY85-89 period of about $\$ 500$ million. $3 /$
10. Loan Reschedulings. Temporary interruptions of debt service are essentially self-correcting, in that payments not received in one year will be made up in the following year. The same would also be true for any rescheduling of principal repayments that did not involve a concession on the interest rate to be charged. Thus, it is only with respect

1/ These nine countries together account for more than $50 \%$ of loan income in the late 1980s.
2/ Temporary suspensions of debt service would probably not result in a reduction of reported income because the Bank could continue to accrue the amounts overdue for some period of time. The existence of large overdue balances would have to be noted in the published financial statements, however. The discussion in this section assumes that the reported income should be large enough to offset these.
3/ Because of the long lead time in adjusting IBRD net income, income targets need to be set about $8-10$ years in to the future. In the 1974 and 1975 reviews, FY85 was the year on which most of the analysis was based. This review uses a five-year average centered on FY87.
to potential reschedulings on concessionary terms that the issue of loss of loan income arises.1/
11. The approach followed by the Bank in recent years to examine the potential for losses of loan income was described in Annex 3 of the 1975 Review of IBRD Capital Structure. This approach classifies borrowers into three broad groups: (a) those presenting little or no risk of debt servicing difficulties (Category I); (b) those for which the risk of debt servicing difficulties is more substantial, but for which any consequential rearrangement of debt maturities could be expected to be at the current lending rate of creditors (Category II); and (c) those presenting a risk of economic conditions which could lead to concessional rescheduling (Category III).
12.

It is important to emphasize that the purpose of this approach is to identify the proportion of the Bank's portfolio at risk if country economic circumstances turn out to be more adverse than projected in the Bank's "best estimates" of the creditworthiness of individual borrowers. The adverse circumstances, which are taken into account in the individual country analyses, reflect the major "downside" risks faced by each borrower, and judgemental assessments of the borrower's ability and willingness to cope with such risks without resort to rescheduling of debt. Even if debt rescheduling were to prove necessary, there would still be a question whether the borrower's obligations to the Bank would be affected. The Bank has a firm policy against participation in reschedulings. If this policy is successfully maintained and the Bank remains apart from any reschedulings that might become necessary, then losses of loan income would still be zero. It is only if both the adverse circumstances and loss of preferred creditor status occur that the Bank might suffer loss.
13.

As in the 1975 review of the portfolio, estimates have again been made of the type of debt rescheduling that would be required to meet each Category III borrower's needs. In the hypothetical situation in which the Bank reschedules the whole of its exposure in Category III countries on concessional terms, its annual income from loans in the FY85-89 period would be about $13 \%$ lower than is shown in the "best estimate" projection. 2/ This is equivalent to about $15 \%$ of interest expense compared to an estimate of about $7 \%$ in the 1975 Review) or about $\$ 660$

1/ The more serious risk to the Bank's finances is that a rescheduling may trigger an adverse reaction by investors such that the Bank's ability to borrow may be seriously reduced. This subject was discussed in the 1978 Review of IBRD Liquidity Policy (R78-130, dated May 31, 1978).
2/ The projections assumed that the defaults would occur gradually over a six-year period. If all defaults were assumed to occur at the same time, the financial impact would be about $40 \%$ greater than indicated.
million. In order to avoid setting excessively conservative targets, the 1975 Review took a mid-point between an assumption of no IBRD involvement in debt reschedulings and involvement of its entire Category III portfolio. This point is taken up further in para. 26 below.

## B. Interest Rate Risk

14. Changes in interest rates affect the Bank's income from securities, income from loans, and interest expense. Two of these three--investment income and interest expense--are largely outside the Bank's control. Thus, exposure to interest rate risk arises to the extent that the Bank cannot adjust income from loans to offset variations in income from securities and interest expense.
15. 

In making projections of IBRD income, no specific predictions of interest rate behavior are made. Rather, the cost of borrowing is assumed to remain constant at the level reached $12-18$ months into the future (the outer limit of reliability for any forecast of rates) and the return on investments and the lending rate are assumed to remain in a fixed relationship to the cost of borrowing. The assumption with respect to the return on investments is that it will be 40 basis points lower than the average cost of borrowing, weighted by amount; the lending rate is assumed to be 50 basis points higher than the average cost of borrowing, weighted by both amount and maturity.
16.

It is recognized that actual interest rate behavior is likely to result in anything but a constant cost of borrowing. But by working with assumptions about spreads rather than specific predictions of returns and costs, the income effects of the simplified assumptions about rates are significantly reduced. While actual results for gross income and expenses may be significantly different from the projected figures, the deviations in net income will be considerably less. Actual net income may, however, differ from projections both because of fluctuations in the relationships between short-term and long-term rates and because of secular trends in the level of interest rates generally. These two phenomena affect, respectively, income from securities and income from loans (or more precisely, the effective spread on lending).
17. Income from securities. In recent years, three factors have combined to reduce the cost to the Bank of its liquid holdings. The first is better investment management. Second, the Bank has benefitted from interest rate cycles that have seen prolonged periods where short-term rates have been above long-term rates. Third, the Bank has diversified its borrowings into markets where nominal interest rates are lower while finding it neither necessary nor desirable to diversify its liquid holdings to the same extent, thereby enabling it to invest currencies with the highest nominal returns. The result has been that in the past three years the average rate of return on liquid holdings has exceeded the average cost of borrowing (weighted by amount) by 50 basis points. This compares with the negative spread assumed in the Bank's financial projections of 40 basis points.
18.

The risk in the future is that neither interest rate cycles nor currency diversification will work as much in the Bank's favor as in the recent past. In this case, a negative spread will undoubtedly recur, and the question is whether the 40 basis point spread assumed in the Bank's projections is enough. As an average over several years, we remain convinced that 40 basis points is a conservative estimate of liquidity costs. In any particular year, however, the spread could be significantly wider. At times in the past the spread between the cost of new borrowing and the return on investments has reached nearly 100 basis points. At least in theory, the Bank could experience a cost of carrying liquidity much larger than this, depending on how the portfolio is managed in response to changes in interest rates. For example, in a period of rising interest rates (and hence falling securities' prices), unrealized capital losses equivalent to $100-200$ basis points or more can build up in the portfolio and if a decision were taken to "reposition" the portfolio, these unrealized losses would sharply reduce that year's income from securities. However, it seems unlikely in practice that reported income would ever result in a spread in excess of 100 basis points even in quite unfavorable circumstances and we propose to use this as measure of the risk to the Bank's net income presented by fluctuations in investment yields. This translates into an allowance for possible loss of net income of about $\$ 75$ million in the late 1980 s , or about $2 \%$ of interest on borrowings.
19.

Income from loans. Because the lending rate is adjusted to reflect changes in borrowing costs, the Bank can always ensure that the actual spread between the lending rate on new loans and the average cost of new borrowing is, over time, the same as the projected spread. $1 /$ The interest rate risk connected with income from loans derives not from a compression or widening of the spread but from the fact that under the present policy of fixing the lending rate at commitment, the Bank's loan income is slower to respond to a change in the lending rate than is interest expense to a change in the cost of borrowing. The following table shows how the average rate on outstanding loans and the average cost of outstanding debt would respond to a 100 basis points increase in the cost of new borrowing matched by the same size increase in the lending rate.

1/ The differences between actual and projected spreads under the present lending rate formula result from the way the formula itself operates, and not an explicit decision by the Bank's management.

Sensitivity of Returns and Costs to 100 Basis Point Increase in Rates in FY80

Basis Points Increase:
FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88 FY89 FY90
Average return on outstanding and disb. loans:
$\begin{array}{lllllllllllll}\text { - Annual } & 0 & 2 & 7 & 9 & 12 & 11 & 10 & 8 & 7 & 7 & 5\end{array}$
$\begin{array}{lllllllllllll}- \text { Cumulative } & 0 & 2 & 9 & 18 & 30 & 41 & 51 & 59 & 66 & 73 & 78\end{array}$
Average cost of
funded debt:
$\begin{array}{lllllllllllll}- \text { Annual } & 9 & 19 & 16 & 12 & 7 & 12 & 4 & 5 & 4 & 4 & 4\end{array}$
$\begin{array}{lllllllllllll}- & \text { Cumulative } & 9 & 28 & 44 & 56 & 63 & 75 & 79 & 84 & 88 & 92 & 97\end{array}$
20. The difference in sensitivity is not caused by a mismatch between the maturity of borrowings and the maturity of loans but rather by the fact that it takes C-8 years for the Bank to disburse a loan, whereas borrowings are normally drawn down at once. While the table above illustrates the case of rising interest rates, the same disparity in response operates when rates fall. Thus, as long as interest rates fluctuate but do not exhibit a trend, the Bank's net income will not be adversely affected by the fact of interest rate volatility. What the Bank loses when rates rise, it gains when rates fall. The risk faced by the Bank is that there will be a secular trend upwards in interest rates such as has been observed in the United States over the past 30 years.
21.

As compared to the projected rates, the Bank is exposed to the risk of a more or less permanent rise in rates. A reasonable assumption as to the outer limit of possible adverse circumstances would appear to be that the Bank's average cost of borrowing might rise to $9 \%$ in FY81 and remain at that level there after. The table below shows how Bank income would be affected under such assumptions. As the table indicates, in estimating the effects of a permanent rise in rates, it is necessary to assume that investment returns will be affected proportionately (the risk of a temporarily widened spread on investment yields is covered separately above).

Income Effects of a Rise in Cost of Borrowing to $9 \%$ in FY81
(\$ millions)

|  | FY81 | FY82 | FY83 | FY84 | FY85 | FY86 | FY87 | FY88 | FY89 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Income from |  |  |  |  |  |  |  |  |  |
| Investments | 97 | 103 | 107 | 111 | 108 | 108 | 112 | 115 | 126 |
| Income from Loans | 0 | 2 | 17 | 59 | 117 | 193 | 279 | 369 | 457 |
| Interest Expense | 31 | 99 | 172 | 248 | 329 | 421 | 514 | 605 | 698 |
| Net Income | +66 | +6 | -48 | -78 | -104 | -120 | -123 | -121 | -115 |

22. As the table shows, there is an initial improvement in net income, followed by several years of losses with the maximum loss of about $\$ 125$ million occurring in FY87. This maximum loss is about $2 \%$ of interest on borrowings in that year and we propose to use this as an allowance for this type of risk. As in the case of temporary fluctuations in investment yields, this is the same allowance as originally set out in the 1974 Review of Financial Policies.
C. Inflation in Administrative Expenses
23. Actual net income could also differ from projected income if the long-run rate of inflation in administrative expenses turns out to be higher (or lower) than is presently assumed in the Bank's financial projections. For example, an inflation rate $2 \%$ higher than presently assumed would add about $\$ 50$ million to annual IBRD administrative expenses in the late 1980 s , or a little more than $1 \%$ of interest on borrowings in those years. If inflation were not to decline from the present high levels, the lending rate could be adjusted upwards to compensate for part of this higher cost, but because of the lag inherent in a fixed-rate policy, the Bank could still suffer an erosion of net income equivalent to about $1 \%$ of interest expense. It is proposed to continue to use this allowance as a measure of the Bank's exposure to unexpectedly high inflation.
D. Net Income Objective
24. The various risk allowances discussd above $c$ an now be brought together into an overall target for the interest coverage ratio. $1 /$

1/ No great significance should be attached to the interest coverage ratio per se. It is used here simply as a convenient way of expressing the Bank's income requirements in relation to the size of interest expense.

Risk Exposure of IBRD Net Income: FY85-89
(Five-Year Averages)

> As a Fraction of Interest on Borrowings

Potential Temporary Reduction in:

- Income from securities 75
- Income from loans al up to $\frac{500}{575}$

Potential long-term erosion in
income due to:

- Concessional reschedulings 660
.15
- Increase in borrowing costs 125
- Inflation in administrative $\quad \frac{50}{835}$ expenses
.02
up to . 10
$\begin{array}{r}.10 \\ .12 \\ \hline\end{array}$
a/ Temporary reductions in income from loans will not affect reported net income.

25. A simple summation of these risks would, by itself, lead to an interest coverage target of 1.30 , or an average pre-risk net income objective in the FY84-89 period of nearly $\$ 1,300$ million per year. However, as the preceding table indicates, of the total risk exposure of .30 , (expressed as a fraction of interest on borrowings), as much as .15, or onehalf, is attributable to the risk of concessional reschedulings and an additional .10 , or one-third, to risks which would not affect reported income. While it is clear that some allowance should be made for the risk of concessional rescheduling, a risk factor of .15 assumes the widespread occurrence of adverse circumstances and a breach in the Bank's firm policy against participation in rescheduling. It thus represents an extremely pessimistic outcome.
26. A reasonable estimate for the income risk faced by the Bank would lie, therefore, substantially below .30. In applying a discount factor of 0.5 to the risk estimate, the 1975 Review noted that the Bank had been successful in maintaining its preferred creditor status and staying aloof from rescheduling agreements. How much allowance ought to be made for this or other factors (e.g., the possibility of the Bank being able to offset the effect of reschedulings by raising the lending rate on new loans) is clearly a matter of judgement. In any event, the target interest coverage ratio would probably fall somewhere in the range of 1.10-1.30. As against this, current projections of Bank income, which assume a continuation of the present spread of 50 basis points, yield an interest
coverage ratio of 1.20 over the period $\operatorname{FY} 84-89$, or an average pre-risk net income about $\$ 900$ million. These projected results would appear to be a reasonable compromise between excessive conservatism and over-optimism about the future.
27. The Bank's net income target must also take the Bank's reserve needs into consideration. Here the question is whether "post-risk" net income will be sufficient to maintain an appropriate capital structure. Because the temporary fluctuations in net income mentioned above are self-correcting, they are not likely to affect the longer-term growth of reserves. But supposing that some or all of the risks that might cause actual income to fall consistently short of projected income do in fact occur, will net income still be sufficient to increase reserves as required? The answer to this depends on what is considered an acceptable minimum level of reserves.
28. 

Given that an allowance for forgone loan income is provided for in the Bank's income target, the only reason for the Bank to have reserves is to protect against the possibility that the Bank might have to write off portions of loan principal.1/ As in the case of temporary interruptions in debt service, it is practically impossible to predict when a loan write-off (as opposed to a rescheduling) would be necessary. Unlike a commercial enterprise, the Bank's borrowers do not "go out of business" because of insolvency, nor is there any reason to believe that any widespread abrogation of debt obligations will take place in the future. Still, the Bank should prudently maintain a capacity to write of $f$ portions of its loan portfolio. Just how much of an allowance to make is a judgemental matter. Several borrowers will each account for $4-5 \%$ of the Bank's portfolio in the late 1980 s, with three exceeding $7 \%$. In the light of this and because of a belief that the Bank's reserve requirement should be conservatively estimated, we recommend that addition to reserves be planned so that reserves would not fall below $8-10 \%$ of disbursed loans.
29. The implication of this target is that additions to reserves need be only about $\$ 300-\$ 500$ million a year between now and FY89. This would require that the Bank have a "post-risk" interest coverage ratio of 1.091.13 on average over the next 10 years, which seems well below what is likely to be achieved. A lending rate spread of $.50 \%$ is more than adequate to generate annual additions to reserves of the required magnitude over the next five to ten years.

1/ Reserves also represent additions to the cost-free resources of the Bank and thus may provide an overall lower cost of funds. This effect is, however, incidental to the main purpose of reserves.

30 A second reason to plan for a particular level of "post-risk" income might be to provide for a certain amount of discretionary income that could be used for IDA transfers or other uses. Hitherto, the Bank's policy has been to transfer to IDA that part of its net income that was in excess of the Bank's own need for reserves. It has not been necessary to set any particular target for discretionary income because the amounts needed for additions to reserves have been generally less than the Bank's net income. This is likely to continue to be the case in the next few years. A 50 -point spread, which would provide an interest coverage ratio of 1.20 , will result in average net income rising from around $\$ 400 \mathrm{million}$ in FY79 to over $\$ 1,000$ million in FY89. "Post-risk" additions to reserves over the next ten years will need to be only $\$ 300-\$ 500$ million per year on average. If the allowances for risk turn out to be more than actually necessary, substantial amounts of IBRD net income will be available for transfer to IDA or other uses.

## Section III: Alternative Lending Rate Policies

31. 

In deciding whether or not to change the Bank's lending rate policy, it is essential to keep in mind the cooperative nature of the institution. The Bank does not seek net income for its own sake but rather it aims to kee? net income as low as is compatible with minimizing the cost of obtaining funds for its borrowers. Under the present policy of fixing the rate at the time of commitment, the Bank carries certain risks on behalf of its borrowers. The question is, therefore, $c$ an and should the Bank continue to carry the full amount of these risks? The answer to this depends on whether an alternative lending rate policy would result in either lower long-term costs for borrowers as a group or a more equitable distribution of those costs among borrowers.
32. The main alternative to a fixed lending rate policy would be, of course, some form of floating rate. An intermediate step would be to allow the lending rate to float during the disbursement period and then "fix" the rate for the remaining life of the loan. Other alternatives are possible, but in one way or another they represent variations of these two basic approaches.

## Floating Lending Rate

33. 

Under a floating lending rate policy, the Bank would have greater short-term control over its loan income (and hence net income), and thus the risk allowances set out in the preceding section could be reduced. The degree of control over net income gained by the Bank through a floating rate system would depend on the details of its operation. In commercial banking, lending rates on specific loans are most frequently determined by a fixed spread above some market interest rate (e.g., the US prime rate or the London Interbank Offer Rate). This approach generally insulates the lender
against variations in the cost of funds and yet protects the borrower from inefficiencies on the part of a particular lender by basing the lending rate on a competitively determined interest rate.
34.

Such an approach would not be suitable for the IBRD because the Bank's own liabilities are for the most part either medium- and longterm fixed rate borrowing or equity. With this structure of liabilities, a lending rate that changed with movements in a market rate--especially a short-term rate like LIBOR--would expose the Bank to possible losses when market rates decline to levels below the Bank's average cost of funded debt. On the other hand, when interest rates were at cyclical peaks, borrowers would find themselves charged for IBRD loans on a basis quite unrelated to what it was costing the Bank to provide those loans. Moreover, a floating rate of this type would compound the risks associated with investment yields, since loan income would most likely increase when investment yields were high and decline when investment yields were low. Finally, the fixed spreads inherent in this approach would enable the Bank to adjust loan income for the effects of concessional rescheduling or inflation in administrative expenses only by increasing the spread on new lending. In this regard, the fixed spread approach would offer no advantage over the present system.
35. A different type of floating rate would be to dispense with the notion of a spread altogether and simply adjust the Bank's lending rate (perhaps once a year) so as to achieve a particular target net income. Such an approach would in the future give the Bank almost complete control over loan income. Once this type of lending rate had been in operation long enough to become effective on the whole amount of outstanding loans, quite small variations in the Bank's lending rate would have a dramatic effect on net income. For example, if a fully floating lending rate were to be made applicable to all new loans starting from now, by FY87 about $60 \%$ of disbursed and outstanding loans would be subject to it, and a 20 basis point increase in the rate would be sufficient to offset the maximum potential reduction in income from securities in that year (see para. 24). The lending rate could in this manner be set to achieve annual targets for net income determined with reference to the minimum acceptable to bondholders and shareholders, including any amount that might be desired for IDA transfers or other uses. Risk allowances would need to reflect only variations in other income items and expenses expected to occur in the current fiscal year.
36.

The attraction for the Bank by itself of this type of floating rate is thus easy to see. Borrowers, however, can be expected to prefer a lending rate fixed for the life of the loan to a floating rate provided that the cost of obtaining fixed rate lending does not outweigh its benefits.
37.

Because of the Bank's cooperative nature, this cost does not appear as extra profits for the Bank except temporarily. If the risk allowances provided in the lending rate spread turn out to be too high,
the Bank's income may be above the required minimum for some period of time, but this "excess" (or "deficient") income will be returned to borrowers as a group through a reduction in the lending rate in subsequent periods. Fixed rate lending would involve extra costs for borrowers as a group only if the Bank were to systematically overestimate risks and thereby earn "excess" income more or less permanently. This possibility seems remote.
38. The real cost of fixed rate lending by the IBRD relates to the distribution of costs and benefits among different groups of borrowers over time. The specific borrowers who benefit from a reduction in lending rate aimed at recycling "excess" income may not be the same borrowers whose (fixed) lending rate turned out to include too great an allowance for the various risks to IBRD income. Whether a floating rate would improve intergenerational equity, however, depends on the perspective that one adopts on this issue.
39.

Two quite different perspectives on this equity issue are possible. On the one hand, the standard of fairness could be that borrowers should each bear the direct costs to the Bank of making the loan, including the cost of funds actually used, administrative costs associated with appraising and supervising the loan, and an allowance for the credit risks of the individual borrowers. One could argue, on the other hand, that all borrowers should share the costs of IBRD operations including allowances for risk; discrimination among individual borrowers should be kept to a minimum. The Bank's present lending rate policy represents a compromise between these two standards. It neither charges individual borrowers for the actual costs associated with the loan, nor does it fully "pool" all costs and risks, except over a long period of time. A floating lending rate would meet the second equity standard by allocating all current costs of Bank operations (including rescheduling losses) to all borrowers according to relative shares of the loan portfolio. From the first perspective, however, a floating rate would appear exceedingly unfair.
40. Just how serious intergenerational inequities are likely to be in practice is difficult to say. If the risk allowances provided for are correctly estimated, such inequities should remain small. If, on the other hand, the Bank were (e.g.,) to operate with a spread of $1 / 2 \%$ for say three years before it became clear that a spread of $3 / 8 \%$ would have sufficed, then about $\$ 30$ million in "excess" loan income would need to be recycled. Doing this through a floating rate on total outstandings would require an adjustment of about 5 basis points (in FY87). Inequities of even 4-5 times this amount would not appear to be serious enough by themselves to justify the introduction of a floating rate.
41. Moreover, the potential consequences of temporary fluctuations in net income are not likely to force the Bank away from fixed rate lending, at least for the foreseeable future. The general trend of income will be clearly upward over the next few years and although fluctuations in
income from securities may cause temporary declines in income (as, for example, occurred in FY76), the level of income should be sufficient to absorb such declines.

## Rate Floating During Disbursement

42. 

A rate set at disbursement would be a compromise between the present system (lending rate set at commitment) and a fully floating rate. Under this alternative, the lending rate would be set for each period's disbursement for the life of the loan. Once the disbursement period is over, a single "replacement" rate could be worked out for the remaining life of the loan, based on the weighted average of the rates applied during the disbursement period. The rates themselves would be determined by adding a pread to the cost of the funds actually being disbursed.
43.

The main advantage of this approach vis-a-vis a floating rate is, of course, that it preserves some measure of fixity to the lending rate that borrowers must pay. Uncertainty about that rate extends only through the disbursment period. As compared to the present policy, a rate set at disbursement would achieve a closer correspondence between each loan's lending rate and the cost of funding that specific loan. In this regard, it represents a move in the direction of the first definition of equity among borrowers set out in para. 39. Moreover, because the effects of changes in the spread as well as the cost of borrowing could be reflected much more quickly in loan income, risk allowances could be reduced, thereby further reducing the scope for intergenerational inequities (in terms of the first standard).
44. However, the drawbacks of such an approach are significant. Like a floating rate, it adds an additional source of uncertainty for borrowers and detracts from the basic role of the Bank as a provider of long-term finance for development purposes. Moreover, a rate set at the time of disbursement could be quite complex to administer. It would most likely require that estimates be made in advance of the cost of funds to be disbursed in each quarter. The average interest rate on each loan would change with each disbursement. Other financial decisions would also be affected. Because of these drawbacks and because this approach is not necessary either on equity grounds or to protect the Bank against unacceptable risks, it is recommended that such a change in lending rate policy not be made at this time.

## Section IV: Formula vs. Ad Hoc Adjustment

45. If it is agreed that the Bank should continue with a policy of fixing the lending rate for the life of each loan at the time the loan is committed, the further question remains as to how the rate itself should be determined. Here there are basically two choices: first, the rate could be
determined by a formula, as at present; alternatively, the rate could be decided on the basis of regular reviews of Bank income requirements, and adjusted from time to time as needed to achieve a particular target net income. While in principle these two approaches appear to present a sharp contrast between automatic and discretionary alternatives, in practice the main difference is mainly the frequency with which reviews of income risks need to be held. With a formula the Bank's income requirements must be reviewed in order to determine the spread to be added to the cost of borrowing (however calculated). While the required spread may be expected to remain relatively constant for an extended period of time, the Bank cannot avoid the need to examine regularly the match between required income and the income actually being generated by the formula. A period of perhaps $3-4$ years is probably the outer limit to the timing of such reviews. With a discretionary approach the lending rate would be changed whenever there were significant changes in the Bank's financial projections. While it would not be necessary for the Directors to make as detailed a review of income objectives as is contained in this memorandum each time the Bank's lending rate is reviewed, it would be necessary to make a general assessment of the Bank's financial condition in light of the current outlook for interest rates, inflation, and other features affecting the Bank's income.
46. The "automatic" quality of the formula approach means that the lending rate may change more frequently than with an ad hoc approach. The drawbacke to the formula approach have been quite evident in the present formula. These are, in brief, a tendency for the rate to move sometimes in the opposite direction of market interest rates, apparently unnecessary movements in the rate, erratic changes up and down, and movements in the rate that appear unjustified in the light of current actual borrowing costs.
47. 

Most of these drawbacks are caused by the way in which the cost base is calculated for the present formula. As noted above, the Bank is a long-term lender with long-term liabilities, and while there are sharp fluctuations in the currency and maturity composition of borrowings from one quarter to the next, there is a greater degree of stability in the borrowing program over a longer period of time. Moreover, because the Bank is not a profit-maximizing firm constrained by competitive forces, there is no need to make the lending rate take account of short-term movements in market interest rates. In other words, the Bank's lending rate should be geared to an average cost of borrowing that reflects the Bank's long-run costs rather than short-term changes.
48.

More specifically, the present weighting of borrowing costs by quarter is a form of double-counting: its purpose is to ensure that the lending rate adjusts to short-term changes in borrowing costs. Yet, as was pointed out above, interest rate risk for the Bank derives mostly from the length of the disbursement period, not lags in the speed with which the lending rate is changed. Weighting the more recent quarters more heavily addresses a problem already dealt with by the practice of
changing the rate quarterly and yet has a negligible impact on the major cause of interest rate risk--the length of time required to disburse a loan--which is in any case allowed for in setting the spread.
49.

The present formula's "normalization" feature has also proven to be cumbersome and confusing. Its purpose was to eliminate any incentive to borrow short in order to reduce the cost of borrowing, while at the same time eliminating any disincentive to borrow long. Hence, each quarter's borrowing cost is not calculated on the basis of the actual average maturity but on a hypothetical average maturity of eight years. We regard this as unnecessary and somewhat misguided. The composition of the Bank's borrowing program is determined by many considerations, including a reasonable balance between maturities of lending and borrowing. The proper way to control the maturity of borrowing is through regular reviews of what constitutes an appropriate degree of maturity intermediation by the Bank, not through a complicated lending rate formula.
50.

These considerations suggest that the Bank could manage with an approach to determining the lending rate that is much simpler than the present formula. However, no assurance can be given that any formula would be appropriate to all situations. Inevitably, judgement must be exercised, if in no other way than to determine when the formula must be changed.
51.

Accordingly, it is proposed that in future the Bank determine the lending rate on the basis of a general guideline rather than a strict formula. At least once per year, and more often if necessary, the lending rate should be adjusted so as to achieve a spread of approximately 50 basis points above the cost of borrowing (weighted by amount and maturity). Normally, such cost would be estimated for a 12 -month period centered on the date of the lending rate decision. An appropriate time to review the lending rate would be in January when a significant portion of the fiscal year's borrowings will be completed and the majority of the year's loans will be yet to be committed. The management would be expected to make a recommendation to the Directors based on the general guideline but if justified could recommend a rate higher or lower than the guideline. If expectations regarding borrowing costs developed in a way significantly different from that projected in January, the rate could be reviewed and adjusted as necessary, for example at mid-year.
52.

In FY80, the Bank's cost of borrowing is expected to be much highe: than in FY79, probably 7.9\%. The reason for the sharp upswing in costs is two-fold: first, rates are rising in world capital markets; second, the exceptionally favorable circumstances in FY79 for borrowings in SwF, marks and yen are not expected to be repeated in FY80. Based on FY80 as a whole, it is expected that the lending rate will approximate $8.40 \%$. For the 12 months ending December 31, 1979, the cost of borrowing is likely to be about $7.8 \%$. It would seem desirable, therefore, at this time

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to set a rate of $8.30 \%$. Accordingly, it is recommended that the lending rate be $8.30 \%$, effective for loans whose documentation is circulated to the Executive Directors after approval of this recommendation.

Attachments


## BRIEF HISTORY OF THE BANK'S LENDING RATE POLICY

1. 

The Articles of Agreement of the Bank do not prescribe the basis on which the Bank is to determine the rates of interest on the loans it makes, but require only that the rate of interest be reasonable and appropriate to the project. There is an explicit stipulation, however, that the Bank charge a commission of between $1 \%$ and $1.5 \%$ on outstanding loans during the first ten years of its operations, the proceeds to be set aside as a special reserve. Although the Bank was free to set its own terms, the need to acquire the bulk of its new funds from capital markets dictated that interest on its loans be governed largely by its own borrowing rate. From the time the Bank commenced operations until 1964 the interest charged to all borrowers was 1.25 percentage points above the estimated cost of borrowing. This spread included a commission of $1 \%$ as required by the Articles.
2.

While the spread of 1.25 percentage points was applicable to all borrowers, the Bank differentiated its lending rate according to the maturity of the loans granted, irrespective of the economic circumstances of the borrower. This differentiation by maturity was intended to reflect differences in the cost of borrowing at maturities of various lengths as indicated by differences in rates in the New York market (then the major source of Bank borrowings). When, in 1956, this difference largely disappeared, the Bank went over to a single "standard" lending rate. After 1956 Bank loans with maturities of less than 10 years became increasingly rare and the question of whether to differentiate lending rates by maturity of loan has not come up again.
3.

In February 1965, the Bank introduced a "market eligible" rate for countries that were in a position to cover their external capital needs by borrowing in private markets abroad. This rate was to be not more than $1 \%$ above the standard Bank lending rate and was intended to approximate the market rate at which such countries could borrow. The "market eligible" rate remained in effect until late 1967, and during this period, seven loans totalling $\$ 383$ million were made at the higher rate to four countries. The case for reintroducing differential lending rates among categories of borrowers was reviewed in 1974, but the Executive Directors decided against it for the reasons that the Bank was in any case phasing out lending to higher-income countries, that the benefits accruing to other borrowers from such a multiple-rate scheme would be small, and finally that the introduction of distinctions among IBRD borrowers would create serious administrative and political difficulties.1/

1/ Review of IBRD/IDA Program and Financial Policies (R74-256, dated December 12, 1974), para. 66.
4.

The Bank's policy regarding its lending rate was discussed extensively in December 1967 when the Bank established an explicit policy objective of keeping the lending rate "as low as is compatible with the maintenance of the Bank's ability to raise...the funds it needs". $1 /$ The Executive Directors were to review annually (or more frequently if advisable) the Bank's overall financial position and determine a maximum spread between the cost of borrowings and the Bank's standard lending rate. The President would in turn be guided by this determination of spread in recommending the lending rate. The maximum spread as agreed to on that occasion was $3 / 8 \%$. Following this statement, the practice was adopted of the President advising the Executive Directors at intervals of approximately six months of the rate that he was recommending in the framework of the policy formulated.
5.

The next major review of the Bank's lending rate policy was undertaken in 1972. The memorandum considered by the Executive Directors at that time noted that it was extremely difficult to determine and measure the specific factors which influence the judgement of the people and institutions which evaluate, market and buy Bank bonds. $2 /$ Nevertheless, the Bank's experience with fiscal authorities, financial institutions, rating services and underwriters, both in the United States and elsewhere, suggested that in external assessments of the Bank's financial soundness, the only major quantifiable factors which carry considerable weight are changes or prospective changes in the level of net income. The Bank therefore decided that the procedure for setting the lending rate on the basis of a spread added to the estimated cost of borrowing should be discontinued. Instead, the lending rate should from then on be determined on the basis of a broad judgement of the Bank's ability to raise the funds it needed, and the effect thereon of the lending rate and the income it was projected to generate. In the 1974 Review of Financial Policies, this approach was translated into specific net income objectives which took account of the various risks to which the Bank is exposed.3/ A further refinement the approach took place in the 1975 Capital Structure Paper which reformulated these net income objectives in terms of a target for the interest coverage ratio and related them to the Bank's reserve requirements. $4 /$ The setting of the Bank's lending rate continued to be guided by this policy until the introduction of the current formula in July, 1976.

1/ Policy Re Standard Interest Rate (R67-182/1, dated December 27, 1967).
$\frac{2}{3} /$ IBRD Lending Rate (R72-178, dated June 29, 1972).
3/ Review of IBRD/IDA Program and Financial Policies (R74-256, dated December 12, 1974).
4/ Review of IBRD Capital Structure (R75-215, dated November 5, 1975).

## Method of Calculating the "Normalized" Cost of Borrowing

The Bank's actual borrowings in a quarter are adjusted in two ays:
(a) issues with average life longen than 12 years are excluded; and
(b) the actual amount of 2-year central bank issues in each quarter is replaced by one-half of the actual issue in that quarter or the immediately preceding one.
2. Having made these two adjustments, an average life of borrowing for the quarter is calculated. If the average life is less than the "norm" of eight years, a computation is made of the amount of long-term borrowing (i.e., with average life over 12 years) which would have had to be done in the quarter in order to yield an average life of borrowings for the quarter of eight years. Its price is either the price of actual long-term Bank borrowings in the quarter (if any were done) or derived from a market-based index of long-term US dollar borrowing costs. $1 /$
3.

The end result is a set of borrowings for the quarter which, taken together, have an average life equal to the "norm" (i.e., eight years). The costs on all but two of the issues are actual Bank borrowing costs in the quarter. The two-year central bank issue is, in a sense, seasonally adjusted so that each quarter is credited with an appropriate amount of this borrowing. The cost of long-term borrowings, which is weighted very heavily in all the calculations of average cost, is a cost based on the quarter itself and the amount is adjusted so that each quarter is charged with the amount needed to give a "normal" average life to borrowing in the quarter.

[^3]
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Attachment 2

IBRD Lending Rates by Quarter: FY77-79

| Fiscal <br> Year | Quarter | $\begin{aligned} & \begin{array}{l} \text { Lending } \\ \text { Rate } \end{array} \\ & (\%) \end{aligned}$ |
| :---: | :---: | :---: |
| 1977 | 1 | 8.90 |
|  | 2 | 8.70 |
|  | 3 | 8.50 |
|  | 4 | 8.20 |
| 1978 | 1 | 8.00 |
|  | 2 | 7.90 |
|  | 3 | 7.45 |
|  | 4 | 7.50 |
| 1979 | 1 | 7.90 |
|  | 2 | 7.35 |
|  | 3 | 7.00 |
|  | 4 | 7.90 |

## Section B. 3: Income

Net Income and Reserve Targets

1. The Bank's policy regarding income objectives has changed several times in recent years. In the early 1970 s the objective was to have a modest year-by-year increase in the absolute level of net income, starting from a base of approximately $\$ 200$ million. In 1974, this objective was revised to take account of the fact that projected "pre-risk" and actual net income could differ. It was then argued that the Bank's net income should be planned so as to have a very high probability of never going negative. In 1976, a "cost-plus" approach was adopted by the Board under which the Bank's net income was to be the level achieved by maintaining a $50^{\circ}$ basis point spread between the Bank's average cost of borrowing and its lending rate. Recent consultations with the Bank's underwriters have confirmed the importance of a rising income trend, but have cast doubt on the significance of negative income for a single year, particularly if there were a readily identifiable, nonrecurring cause. The latest projections of IBRD net income through FY86 are shown in the table below:
```
IBRD Net Income FY81-86
                                    ( \(\$\) millions)
```

Est.
2. The principal reason for the Bank to have reserves is to protect against the possibility that the Bank might have to write off portions of loan principal. I/ In the more than 30 years of its operations the Bank has never suffered a loss on its loans. There is thus no basis for determining any specific reserve against loan losses. Except in the early years of Bank operations when a $1 \%$ loan commission was set aside in a Special Reserve to be held for the purposes of meeting liabilities of the Bank on its borrowings and guarantees, all IBRD net income retained in the business has been added to a General Reserve. The part of paid-in capital which has been released for use in operations also adds to the margin of protection against loan losses.
3. Recent discussions of the IBRD's equity and reserve position have recognized that paid-in capital and retained earnings are not very important to the creditors' assessment of the financial soundness of the Bank. Creditors may be expected to look at total capital--of which paid-in capital and reserves are only a quite small part--for protection against loan losses. Shareholders, on the other hand, want reserves to be sufficient to ensure that their capital will not be

1/ Reserves also represent additions to the "cost-free" resources of the Bank and thus may provide an overall lower cost of funds. This effect is, however, incidental to the main purpose of reserves.
impaired. Based on the consideration that several borrowers could each account for over $4-5 \%$ of the Bank's portfolio in the late 1980s, with three exceeding $7 \%$, an addition to reserves amounting to $8 \%$ to $10 \%$ of the annual increase in disbursed loans has been used as a benchmark to meet the reserve objective.

Income Predictability
4. The income risks that the IBRD faces fall into three categories: (a) unanticipated reductions in income from loans as a result of defaults and/or reschedulings; (b) higher than projected administrative expenses; and (c) unfavorable and unforeseen movements in market interest rates. $1 /$ Past reviews of these income risks have given substantial weight to the first type of risk, even though the likelihood of this risk materializing in practice was thought to be quite small. On the other hand, the risk associated with unanticipated adverse movements in interest rates appeared relatively less important.

1/ Changes in interest rates affect the Bank's income from securities, income from loans and interest expense. Two of these three--investment income and interest expense--are largely outside the Bank's control. Given the Bank's policy of fixing the lending rate at the time of loan commitment, its exposure to interest rate risk arises since it cannot rapidly adjust income from loans to offset variations in income from securities and income expense.
5. Our current assessment is that this emphasis should be reversed, that less weight should be given to reductions in loan income and more to interest rate risks. Both the level and volatility of interest rates have increased substantially in the last few years and, in addition, the IBRD's more highly leveraged capital structure in the future, particularly if lending is significantly expanded, will expose it to more of these risks. The net income projections should thus be seen as subject to fluctuation mainly on the basis of interest rate developments different from those assumed in the projections.
6. The Bank's projected net income and additions to reserves appear to be adequate, even on a "post-risk" basis, to support its "current" lending program, i.e., the program as described in the FY81 Budget document. Whether the outlook would remain equally attractive under an expanded lending program would naturally depend on the degree of expansion in lending contemplated.
7. The adequacy of the Bank's projected income and reserves in the context of alternative expanded lending scenarios was examined in the recent Board memorandum on expansion in IBRD/IDA lending. 1/ Two scenarios other than the current lending program (labelled Scenario A) were examined: Scenario B totalled $\$ 93.8$ billion in FY82-86 compared to the current program of $\$ 60$ billion, and provided for lending to China, additional lending for energy and structural adjustment, a
correction for higher than anticipated inflation, and a shift of $\$ 3.3$ billion in lending from IDA to IBRD terms, while Scenario $C$ represented the expanded IBRD program as it would appear if all energy lending other than to "IDA only" countries ( $\$ 25.4$ billion in FY82-86) were financed through a separately capitalized energy affiliate. The analysis showed that under both these scenarios, some action would be needed to strengthen the Bank's income and reserves to make them more attractive, with Scenario B naturally posing the bigger problem.
8. The actions which might be taken are of two kinds: (a) steps to increase the IBRD's own capacity to carry the risk of possible interest rate fluctuations; and (b) steps which would permit the IBRD to pass on more of such risks to the borrowing countries. A decision to increase the IBRD's own capacity to carry the risks would mean finding ways of bolstering planned (or "pre-risk") net income. One way of doing this would be to increase the spread on IBRD lending. However, since the most serious deficiency in the income projection (in Scenario B) arises between now and FY86, and since an increase in spread has relatively little effect in the near-term because of the long disbursement period of Bank loans, this would not be the most efficient way of dealing with the net income problem. It would be more efficient to increase the loan charges collected in the very early years of a loan, for example through the levy of some kind of front-end fee. In principle, net income could also be increased in the near-term through additions to paid-in capital for the IBRD beyond
those planned in connection with the General Capital Increase, but there would appear to be virtually no prospect of this happening, except of course through capital subscriptions to the energy affiliate.
9. The alternative to bolstering the IBRD's pre-risk net income would be to take steps to minimize the fluctuations in net income, so that it would no longer be necessary to build in such a large cushion to withstand unanticipated and adverse interest rate movements. One way of doing this would be to fix the interest rate on loans at the time of disbursement rather than at the time of commitment. Another would be to provide some degree of adjustability in the interest rates over the life of a loan. Either technique would permit the IBRD's income from loans to react more quickly to changes in interest rates, and thus lessen the potential fluctuations in net income. We are examining these and other alternatives in connection with the study of possible innovations in borrowing instruments (cf. Section A. 3 above on IBRD Borrowed Funds).

## Lending Rate Policy

10. The present "cost-plus" approach to the setting of the Bank's lending rate goes back to 1976 when the Bank at U.S. insistence adopted a formula whereby the lending rate was changed each quarter so as to maintain a 50 basis point spread over the "normalized" borrowing cost during the preceding 12 months. The purpose of the
"normalization" was to adjust the cost base to reflect a hypothetical average maturity of borrowing of eight years; it was carried out by means of a complex procedure using market proxies. The cost base was further adjusted by weighting the more recent quarters more heavily.
11. The 1976 formula continued through the end of 1979 , when it was replaced by the present lending rate policy. This policy maintains the "cost-plus" approach of the old formula but is simpler and more flexible to operate. It provides that at least once a year, and more of ten if necessary, the lending rate should be adjusted so as to achieve a spread of approximately 50 basis points above the average cost of borrowing for a twelve-month period centered on the date of the review, reflecting actual borrowing experience for the prior six months and best estimates for the following six months. Lending rate reviews would normally be in January, but the policy provides that the rate should be adjusted more frequently than once a year if conditions warrant. Since the inauguration of this policy in January 1980, there was a mid-year adjustment in July 1980, and a similar adjustment is likely in July this year because of unexpectedly high borrowing costs. The current IBRD lending rate is $9.60 \%$.
12. The spread of 50 basis points was arrived at not as a result of any precise calculations of the Bank's operating costs but essentially because it yielded levels of projected net income that seemed broadly appropriate for the Bank. Management has continued to
favor this "income target" approach to the setting of the lending rate, but several of the Part I countries (U.S.; Germany; Japan; U.K.) regard the 50 basis point spread as a firm requirement which is subject to change very infrequently (say, every three to five years) and then only after a formal Board review. There are several reasons why these countries have taken such an inflexible position: (a) suspicion that a more flexible approach could be abused by management in order to keep the lending rate lower than it should be; (b) a desire to avoid divisive discussions of the lending rate in the Board by adhering to a virtually automatic approach to lending rate adjustments; (c) a recognition that any single lending rate decision has only a very modest impact on projected net income, so that it is hard to argue persuasively on income grounds that any particular change has to be made.
13. Our current plan is to adhere to the 50 basis point spread in the lending rate change proposed for Board consideration on June 23 (which will probably be deferred until June 25 at least). Nevertheless, the Part II Directors may be expected to challenge the continuation of such a mechanical approach and to urge that the whole lending rate policy be reconsidered in an effort to find ways of minimizing the impact of sharply higher rates on the borrowers.

## Uses of Net Income

14. The Bank's Articles of Agreement require that the Board of Governors should first consider provision for reserves before making allocations of net income. In 1964, the Bank established a policy of transferring to IDA part of the Bank's net income which is "not needed for allocation to reserves or otherwise required to be retained in the Bank's business and, accordingly, could prudently be distributed as dividends". As has been mentioned earlier, these grants, which have averaged about $\$ 100$ million annually in recent years, have added up to a total of $\$ 1,543$ million through the current fiscal year.
15. In addition to the amounts made available to IDA, the Bank has for some years now made grants, from the IDA transfer, to finance agricultural research (in the shape of research programs sponsored by the Consultative Group on International Research) as well as a program for the control of onchocerciasis (river blindness) in the Volta river basin of West Africa. Grants for these purposes totalled $\$ 18$ million in FY81. A proposal to make a similar grant of $\$ 2.5$ million in 1981 to finance research in tropical diseases is scheduled for consideration by the Board on May 7.
16. Proposals have been made from time to time in the Board and elsewhere that the Bank should consider other potential uses of surplus net income. Suggested uses include transfers to members through a system of dividends or rebates, the setting up of an interest subsidy fund to subsidize lending to the poorest countries, transfers for funding energy exploration or to set up an evergy
affiliate, the creation of a fund to guarantee investment by other lenders, policy and research-oriented transfers (e.g., funding of research on the control of tropical diseases, or study of development issues), and finally increased allocations to IDA.
17. Sentiment in the Board is divided with regard to such proposals. There is increased appreciation, particularly among Part I Directors, of the Bank's need to retain sufficient net income to maintain a strong equity base. Proposals for other uses of Bank income will therefore have to be approached carefully.
18. There is also a technical issue relating to the grants being made from net income for financing agricultural research and onchocerciasis control, and now proposed for research in tropical diseases. The Bank's external auditors have questioned the manner in which these grants are being accounted for, namely as part of the transfer to IDA. They believe that the grants are similar to charitable contributions which would be treated as an expense under generally accepted accounting principles, and hence should be treated as an expense of the Bank. For the present, however, they are agreeable to the continuation of past practice since they consider the amounts involved immaterial. This matter will be discussed in the Board when the proposal for the grant to finance tropical disease research is considered, and we expect that the Board will approve continuation of the previous accounting treatment. A commitment may
however have to be given that the issue will be discussed further with the auditors in FY82.

## Reference Documents

B.3.01 Board Memo on Review of Lending Rate Policy (1979)
B.3.02 Extract from Board Memo on Expansion in IBRD/IDA Lending
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[^0]:    1/ In the last few months, this situation has reversed and the Bank has been granted access to some markets only on the understanding that the funds it borrowed would not be immediately disbursed.

[^1]:    1/ In years past, a borrower's repayment obligations were determined by the specific currency disbursed. This led to substantial differences among borrowers in the effective cost of Bank lending. The Currency Pooling System which distributes the exchange risk equally among all borrowers was introduced to address this problem, although it leaves unchanged the global currency risk exposure.

[^2]:    1/ "Grace Periods and Final Maturities of IBRD Loans in FY79 and FY80" (R79-240, dated September 13, 1979).

[^3]:    1/ The market-based index used is the quarterly average of the Salomon Brothers' index of new AAA utility bonds with an assumed average life of 25 years.

