

SOME INFORMAL REMARKS ON DEBT MANAGEMENT AND LIQUIDITY

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Thank you for the opportunity to make some general comments about the experience of the World Bank with respect to some of our policies concerning foreign exchange risk and liquidity management. I must say, however, that I am not at all sure that our experience is relevant to your experience or to the decisions that all of you have to make, or, indeed, even to the points made by the previous commentators. Nonetheless, the World Bank does operate in the market place both in dollars and other currencies, and perhaps the way we make financial decisions may provide some insights which may be useful.

First, some facts: The World Bank has \$30 billion equivalent in outstanding debt, of which only \$9 billion is denominated in U.S. dollars. The balance is primarily in Deutsche mark, Japanese yen, Swiss franc and Dutch guilders, with smaller amounts denominated in 12 other currencies.

The risks and costs of assuming foreign exchange risks are borne by the developing countries to whom the Bank lends. Thus, if the Bank borrows a currency which appreciates, that cost, including the foreign exchange risk, is borne, on a pooled basis, by all of our borrowers--to whom the Bank lends the currencies it borrows. The Bank currently borrows at fixed interest rates for 5 to 15 years in six to eight different currencies. Since it must repay the currencies it borrows, it passes on that currency risk to its borrowers. There is no Predex survey which predicts what the Deutsche mark will be vis-a-vis the dollar 15 years from today. There is

no forward market to hedge risks for 15 years. Thus, a World Bank borrowing in Deutsche mark is disbursed over many years to borrowers who must repay those Deutsche mark but whose foreign exchange reserves are normally constituted in dollars. You immediately can see the nature of the problem.

How we decide what currency to borrow is a threshold question. Let us assume for a moment that we have a choice of borrowing, perhaps 200 million Swiss franc for 15 years at a cost of 8%. Alternatively, we can borrow the equivalent amount--U.S. \$100 million--for the same period at a cost of 17%. Let us assume that in our infinite wisdom we are certain that the Swiss franc will revalue against the U.S. dollar by 50%--that is, from 2 Swf = \$1 to 1.5 Swf = \$1--and will remain at that level throughout the life of the loan; the books of our borrowers will therefore show a rather substantial loss or reduction of reserves in U.S. dollar terms.

Our guidelines are rather straightforward. We should ignore the implications of accounting convention which require showing the potential foreign exchange loss in making the decision what to borrow. The fact is, that unless the Swiss franc, in the example, revalues from two to one to .61 Swf = \$1, it pays, in financial terms, to borrow Swiss francs. The only issue is whether you believe that the interest rate differential--8% versus 17% or 9% a year, compounded over 15 years--will or will not be offset by the revaluation of the Swiss franc. That is the critical issue--even for a dollar-based institution. Borrowing dollars is too easy a decision. No one, unfortunately, will levy criticism for the opportunity loss from not having borrowed Swiss franc.

Several years ago, when the Deutsche mark was 1.70 and the Swiss franc was 1.55 and the yen was 170 to the dollar, we took a position that these currencies would devalue against the U.S. dollar. We concluded that given the prevailing exchange rates and a 7% interest rate differential from U.S. dollars, there would be a significant inflow into U.S. dollars and out of the Swiss franc. We believed that it was quite irrelevant that Switzerland, at the time, had a 1% inflation rate and the U.S. inflation rate was 11%. In short, we did not believe that the real return (nominal rates less inflation rates) predicted future exchange rates when the rate differentials and rate levels were that far apart. Foreign currency traders, in short, know and care little about purchasing power parity. Thus, we borrowed Swiss franc, Deutsche mark and yen and lent them in the expectation that it would be in the best interest of our borrowers. In the last 4-1/2 years, the exchange rate gain from having borrowed \$15 billion equivalent of Swiss franc, Deutsche mark and yen was \$1.5 billion. The nominal cost (the interest rate) of those borrowings was 7.2%. Both of these "risks" were passed on to our borrowers as an alternative to borrowing dollars which, had we borrowed them on the same dates and maturity, would have cost 10.95% in nominal terms.

I must confess, however, we did not expect those currencies to devalue as much as they did against the dollar in the last 4-1/2 years; certainly not. We simply did not expect them to continue to appreciate by the interest rate differential. In fact, what occurred--strange world--was a double-kicker--both a low nominal interest rate and a devaluing currency. Currently, the Bank continues to borrow Swiss franc, Deutsche

mark and yen--given current interest rate differentials between those currencies and the U.S. dollar.

As you may know, we have recently tapped the Swiss franc and Deutsche mark not only by borrowing those currencies in capital markets, but by assuming through forward contracts the streams of payments of others in those currencies--who are uncomfortable with the currency risks attendant to those liabilities. We simply contract to assume the Deutsche mark or Swiss franc obligation--the stream of another's future liabilities--in return for their contracting to meet our liabilities in dollars. In short, we look to the future. We ask ourselves whether we prefer Deutsche mark at 10-1/4 or dollars at 17% and will take the former from a corporation who wishes to book a profit or cut the loss from their previous borrowing in Deutsche mark.

We also look to trade related swaps. Is there steel manufactured in Germany or ships built in Japan whose export depends on buyers being willing to assume yen or Deutsche mark obligations for many years to come. These buyers, because of the absence of long-term foreign exchange forward contracts, have little way to protect themselves, except through costly six-month forward contracts, against appreciating yen or Deutsche mark. We are prepared to tap into the world's trading markets by offering a forward contract whereby we take yen, Swiss franc and Deutsche mark liabilities contracted in international trade and, in return, offer our dollar obligations.

You may ask why there isn't a foreign exchange market for eight or ten years. Simply because banks would be too exposed. They cannot

prudently maintain that kind of open foreign exchange position. A commercial bank finds it quite difficult to hedge long term foreign exchange liabilities. The staff and the management of the World Bank calculate the breakeven points, i.e., the interest rate differential in U.S. dollars versus the potential foreign exchange risk. The ultimate taker of risk is a developing country; management's job is to make decisions which will prove to be in the best interests of our borrowers.

Some might ask whether there is a better way than to burden developing countries with Swiss franc, Deutsche mark and yen. The answer is simply that we think it is better and wiser in financial terms to borrow Swiss francs at 8% than dollars at 17%. You may say, however, that dollars cost 17%, and that cost, expressed in dollar terms, is known and certain. The effective cost in dollar terms of the Swiss franc is unknown. In neither case is the opportunity cost known. It is, we think unacceptable to simply borrow dollars and ignore the implications of not borrowing Swiss franc. Better to borrow the Swiss franc or yen or Deutsche mark if one believes it will not revalue by the interest rate differential over the life of the borrowing than to pretend there is no choice. In short, make a conscious, rational decision which you think will be to the financial benefit, in real terms, of the ultimate risk-taker.

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I would now like to address your attention to some of our policies concerning liquidity management.

At the end of the last fiscal year, June 30, 1981, the assets of the World Bank, expressed in United States dollars, amounted to \$58 billion,

of which \$8.5 billion were invested as relatively short-term liquid assets in obligations of governments, banks and financial institutions of its member countries. Most of our liquidity was in U.S. dollars (\$6 billion) with substantial holdings in Deutsche mark, pounds sterling, Japanese yen and French franc. These liquid resources are designed to provide the World Bank with flexibility on the timing of its borrowing operations; when bond markets deteriorate, we will draw down our liquidity until markets stabilize. However, because the liquidity is derived from borrowing funds before those resources are needed in the Bank's operations, it is necessary to actively manage the portfolio in order to minimize the cost of carrying these "advance" borrowings.

The Bank places its liquidity in negotiable instruments --primarily government or government-guaranteed bonds and bank obligations such as certificates of deposit or eligible bankers' acceptances. No instrument can have a maturity in excess of five years and three months. The portfolio is actively managed. Trading volume can reach \$80-100 billion equivalent a year. My comments here are designed to set forth some of the management principles and basic premises which guide the decision making in the investment of our short term liquid resources.

#### Some Thoughts About Portfolio Management

Everything we own is available for sale--all the time.

The portfolio is managed with a view toward obtaining the highest potential future total return.

The staff should pay no attention to the cost of a security after it is purchased in determining whether or not to sell it. Cost is a past event; it tells us nothing about whether we should hold a security or sell it.

There is no such thing as a "hold" recommendation. If we own it, we would buy it now if we did not already own it. If its future potential is mediocre, we should sell it.

We attempt to pay no attention to the accounting consequences of our sales; indeed, we should not normally know whether we have a gain or loss when we sell from our portfolio. We should ask ourselves one question --Is the potential future rate of return greater if we hold to some specific date in the future or is it better that we sell the security and use the proceeds for an alternative, potentially better investment?

Permit me to use examples. If we purchase a security at a 10% yield and it rises to a yield of 15% and the staff concludes that yields will rise further--perhaps to 15.5%--that security should be sold immediately, irrespective of the fact that it was purchased at a yield of 10%--if there are, alternatively, other investments with the proceeds with a lesser potential for loss over the same time frame. The mistake has already been made in connection with the initial purchase. All we are doing by selling is admitting to our error and reporting the loss on our books. There are few in this room who do not have substantial losses which, though not shown on your books, have nonetheless occurred in respect to your financial transactions. It is irrelevant that your income statement may not reflect the fact that you bought bonds at par when you and I know that the market is at 60 or 80. An error in market judgement has been made irrespective of what you are required to show to shareholders or bondholders. A sale merely admits to the mistake.

Another example may be illustrative. If a security is trading to yield 12% and another of identical quality and maturity is trading to

yield 12.25%, we should sell the former and purchase the latter, irrespective of the consequences of such action on our accounting statements, i.e., whether we have a gain or loss--if we believe that the aberration in yields is, in fact, an aberration and is not likely to get worse. If we expect it to get worse, we will wait.

We should move the portfolio from an average life of 4 years to an average life of 2 weeks if we believe that there is a high probability that interest rates are likely to rise, and we should do the reverse if we think that rates are likely to decline--subject to liquidity constraints in the secondary market.

There are no external material rewards or punishments for superb or disastrous decision making. I believe that such rewards and punishments inhibit rational analysis of what will happen to interest rates and are not productive incentives to correctly predicting rates. Our egos, our fears, our concern about jobs, capital and "looking good" have nothing to do with predicting interest rates. Therefore, to the extent possible, my responsibility is to relieve the staff from external constraints--and let them concentrate on interest rates. Permit me to give you another example. If I tell those of you on my left that if you predict the interest on government bonds with an eight-year maturity one year from today, plus or minus 50 basis points, I will give you whatever reward you wish in a monetary sense; indeed, with a \$9 billion portfolio it would be quite worthwhile to offer substantial material incentives for a correct prediction of interest rates. With respect to those of you on my right,



the same obligation exists: simply predict the interest rate on an eight-year bond--one year from today. But rather than a reward, your incentive will be to avoid punishment--if you are wrong by more than, say, 1%. Consider the punishment that might be appropriate: your jobs, your freedom, your physical well-being. I must tell you that I am afraid that your preoccupation with the reward or punishment will interfere with rational decision making. Your desire for reward, your wish to avoid punishment will, in short, interfere with what you think will happen to interest rates. I suggest to those of you in the center of the room, 'you are not going to have any reward; you are not going to be punished; simply do your best and tell me what you think is going to happen to interest rates.' I am convinced that those of you in the center will consistently outperform either group on the sides of the auditorium. In the extreme groups, you will attempt to hedge your bets; there will be a regression to the mean, an attempt to cover up and minimize the possibility of being too far wrong. I would suggest it is better simply to encourage responsible managers to state what they think--with whatever unsuredness they feel.

All of the predictions of the staff should be circulated throughout the office. Thereafter, all predictions, with their probabilities of occurrences, are compared to what actually happened, and these, too, should be circulated.

We should measure ourselves against perfection. Obviously, we also measure ourselves against some traditional indices. We measure ourselves against what could have happened if we had invested only in one-day money.

We measure what would have happened had we bought a portfolio equally balanced between one-day, three-month, one-year, two-year and five-year securities. We measure ourselves against our performance had we randomly selected from within the maturity range from one day to five years. We measure ourselves against what would have happened if we had done nothing. Finally, we measure ourselves as I indicated, in hindsight, against perfection. What would have happened if for each week for fifty-two weeks we shifted the portfolio from long to short perfectly to maximize the total financial return each week of the year. We also seek to determine whether our performance is due to daily day-to-day trading or to more long-term evaluations of interest rates.

We seek to predict interest rates for five different time periods and for six different instruments ranging from 1 day to 5 years at probabilities of 1 in 2, 1 in 4, and 1 in 10. We seek to hold that security which has the greatest probability of giving us the highest rate of return with the least amount of risk. Conversely, we sell those securities which have the lowest potential return and highest risk. Risk is defined as uncertainty --in probability terms.

The point of assessing and quantifying probabilities is simply to honestly reflect our own anxieties about particular securities over particular time periods in the future. We hope to measure whether or not, in the past, we have assessed our own uncertainty when we ascribe probabilities to future interest rates. For example, if a colleague predicts that there is a 3-in-4 chance that a three-month U.S. Treasury Bill one month from today will trade between 11% and 11.5%, we should go back and

ask, with respect to the predictor of interest rates, whether in fact in 3 chances out of 4 his short-term, i.e., one month, predictions of short-term paper was or was not borne out by subsequent events. That helps make decisions. I would not seek to extract a prediction of interest rates which is more precise or more exact than what the staff feels. The point is to measure and reliably quantify unsuredness and uncertainty. If a staff member believes there is 1 chance in 2--50/50--that the market for three-month Treasury Bills will be between 9% and 18% one year from today, that is a perfectly acceptable recommendation--because she is saying she is unsure, and that is what I want to know. In order to be "right", half of the time, in this example, rates should fall below 9% or above 18%. Then, we know she can accurately and quantitatively reflect her own uncertainty.

The point of interest rate forecasts is to enable us to make investment decisions on whether we should hold short or long instruments. In making these predictions, we review the major outputs of econometric models which describe the status and the projected status of the U.S. economy. We talk to many banks to assess loan demand. We talk to perhaps half-a-dozen economists a week. We review scores of economic write-ups and publications each week. We monitor the position of Wall Street. We discuss the general technical condition of the market with a dozen major dealers in New York. We have open lines to about 20 firms throughout the country. We have daily telephone communications with the largest banks and dealers active in each European market. We develop in-house forecasting models using financial variables such as money supply, Federal

funds, foreign exchange, and "real economy" variables (e.g., business loans, housing starts, retail sales, CPI, etc.). In short, we try to bracket interest rates and do so for a variety of maturities and instruments and at varying probabilities. Then we make investment decisions with respect to how we want our liquidity invested.

Financial rates of return (not "accounting" or book yields) are calculated for the portfolio as a whole as well as for specific sectors such as Treasury Bills, Certificates of Deposit, government notes, Eurobonds, etc. Often we will shift from domestic CD's to Euro CD's depending on spread differentials, or from short-term to long-term instruments quite quickly. Or we will shift from one instrument to another because of market pressure or market aberrations which make virtually identical securities more (or less) valuable than they should be on the basis of historic relationships.

One final point, perhaps the most critical. The staff is trained to admit to error and admit to making mistakes. No one "overrules" anyone else. We measure ourselves in terms of opportunities lost, not what our books show. If we buy a security at par and it trades at 105, and we sell it and it later trades at 110, we made a mistake. We should have waited. We record what we said should have been done, what we in fact did, and what would have happened if we had made optimal decisions --in hindsight. There is a certain subtle correlation between being comfortable with admitting to fallibility and error with being able to say what you think. And being able to say what you think correlates better with being right than does studied vagueness or fear of making a prediction or decision.

Thank you for your courtesy.