

## ON LIQUIDITY: WHY WE HAVE IT, AND MANAGEMENT PHILOSOPHY

If resources were not available to the Bank, either because of disarray in financial markets or simply because costs were too high, we would delay borrowing as we have done in the past and draw down our liquidity. That liquidity, which stands over 20 billion as compared to about \$1.3 billion 18 years ago, was deliberately built up by what one might call "excess" borrowing. It was built up so that the Bank would have the flexibility to decide when to borrow, where it borrows and how much it borrows. We do not want to be in the position of having to borrow when we would prefer to wait six months. The liquidity policy serves that function.

Thus, the Bank systematically has increased its liquidity position by borrowing substantially in excess of its current requirements at times when funds were obtainable at what we considered reasonable costs and terms of maturity. We do not wait until we need resources to meet our requirements. Rather, we anticipate those requirements and hold liquidity.

Finally, with respect to our liquidity, if it appeared that because of an expectation of prolonged instability in world capital markets, our liquidity might decline to an unacceptable level, the Bank could reduce its lending program. While we would regard such action as inconsistent with our role as a development institution, the interests and protection of holders of our obligations would be of overriding importance. So far, no such measures have been

required, nor do we expect that they will be needed in the future. Our first line of prudence, however, is to have more liquid resources than we currently need, which can be drawn down when market conditions are unstable.

Let me take the opportunity to talk for a few moments about that 20 billion in liquidity; for indeed, we are not only a large borrower in the market, we are a rather significant investor in the marketplace. Since we do not take a currency risk when we borrow dollars, Deutsche Mark, Swiss francs or yen, or any other currency, we invest them in a wide variety of instruments -- ranging from 1-day money to 5-year bonds pending disbursement on loans. The portfolio of our liquid resources is actively managed. It has traded up to \$4 trillion a year, inclusive of our short term placements with banks. Our goal is rather simple. Since we have the liquidity which is designed to give us flexibility as to when we borrow, we want to manage that liquidity (even when there is a positive yield curve) so that the short term investments will produce a rate of return higher than the cost of borrowing long term funds. That means the funds must be managed. In short, we do not want the holdings of our liquidity to be costly. That involves some management procedures, techniques, policies and philosophy which I would like to share with you. You may find it relevant to your own operations.

The rules of the game should be straightforward:

- 1) A security, once purchased, is always available for sale;

2) The portfolio is managed with a view toward obtaining the highest potential future financial rate of return;

3) The staff is to pay no attention to the book cost of a security after it is purchased in determining whether or not to sell it. Book 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 future -- 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 con-

nection 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 12.05%, we should sell the former and buy the latter -- assuming that the securities do not normally trade at a .05% away from each other. 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 three chances out of four is 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 one chance in 2 -- 50/50 -- that the market for three-month Treasury Bills will be between 9% and 16% 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.