

have asked that several agencies, in evaluating their programs, discount cost and benefit streams at a 10-percent rate, and then test for sensitivity to 7.5 and 12.5 percent rates. In these cases, our thinking was largely along the lines that we would identify the activity with corresponding sectors of the private economy.

I might also mention a recent study of oil shale development in which the economic attractiveness of oil shale development to private developers was tested at rates of 12 percent and 20 percent as a basis for determining whether this was economically attractive and for analyzing what government actions might be indicated.

Now, to sum up, I believe a desirable procedure would require, first, a display over the expected life of the program of costs and benefits or physical outputs as part of the analysis for decisionmaking. We now require this in the program memoranda and the program and financial plans under the PPB system.

Second, for programs that have both costs and benefits expressible in dollars and which directly displace private investment in a specific sector, the rate of return in that sector is an appropriate discount rate for calculating the present value of costs and benefits.

Third, for most public investment, we should use as the appropriate rate the private returns that must be foregone over the economy as a whole to release funds for public investment. This rate should eliminate allowances for risk, providing that costs and benefits are explicitly adjusted to allow for the risk of the public project.

Fourth, a riskless rate of return in the private sector should not be less than the rate of return on long-term Government bonds, and neither should the discount rate. Studies should be undertaken to develop a more reliable basis for estimating the riskless rate of return in the private sector.

Fifth, in analyzing programs, we should test for sensitivity to variations in the discount rate.

Sixth, where subsidies are regarded as socially desirable, we should express them explicitly in cost-benefit calculations rather than in the discount rate.

I believe that the above points represent the direction in which we have been moving and will continue to move and that this movement will produce significant improvement in the analysis of Government investment programs. In the coming months, the Bureau of the Budget, in cooperation with Federal agencies and departments, will be continuing its work to improve the use of discounting in the evaluation of public investment programs.

I might simply add that my discussion of the problem, which has stressed the complexity of the problem is not, in my mind, an excuse for abandoning the attempt to apply explicit quantitative analysis to decisions about Government programs. Rather, it is a challenge to develop appropriate concepts and the needed data.

Thank you. I appreciate the opportunity to present this to you.

(The prepared statement of Mr. Hoffman follows:)

**PREPARED STATEMENT OF HON. FRED S. HOFFMAN, ASSISTANT
DIRECTOR OF THE BUREAU OF THE BUDGET**

I am happy to appear before this subcommittee to discuss the question of discounting in the evaluation of Government investment programs. This question is, of course, a part of the larger question of the evaluation of public expendi-