

project. Would you make allowance for the notion that we might make a breakthrough in the saline area so we might be able to get some sea water that might possibly make water projects unnecessary or obsolete?

Mr. HOFFMAN. Yes, sir; I think that would be an entirely relevant observation. When you move to that kind of consideration, you are moving from risk to what economists would call uncertainty. The difference is that in a situation of risk you are able to estimate the odds, in a situation of uncertainty, you are not. We do feel—at least, I feel, and I think it would be generally accepted—that investment in a water resource project would be risky by virtue of the possibility of technological obsolescence; that is to say, the benefits that you calculated as flowing from that project might not accrue; because there might turn out to be a cheaper way to do it.

I would think that, at the very least, that where such possibilities can be identified their effects on benefits ought to be calculated. If it is possible to estimate the probability that technological obsolescence will occur, you can estimate an average value. Where you cannot make such an estimate you can simply look at the two streams of benefits and say: This is how it will turn out if we do not get the breakthrough; this is how it will turn out if we do. You must then call upon the judgment of the decisionmaker to evaluate those two streams of benefits, discounted to present values.

Chairman PROXMIRE. How would you arrive at the discount rate, again, for the riskless and those that have a risk? Would you have more than one level of risk?

Mr. HOFFMAN. Well, the notion of a two-part approach is really, as I tried to indicate, a pragmatic notion. It is a way of getting started. In some areas, we can identify Government activities with particular parts of the private sector. In those areas, I would say we ought to rely on the judgment of the private sector as to risk. The private sector does give us measure of risk in those cases. It is in the areas where public activities have no direct analog that I would argue that we want to handle risk explicitly outside the discount rate, and then we should start from an estimate of a riskless rate of return.

Chairman PROXMIRE. If you do that, then you would have to correct the discount rate now being used by the Defense Department for shipyards and many other things of this kind, and you would have a situation where you would either have to spend more money or not fund projects which show a positive benefit-cost ratio.

Mr. HOFFMAN. Now, in those cases, Senator, it seems to me that the relevant question is not whether to go ahead with a project or not, but how best to do it; that is to say, the calculation in the case of Defense would be, what is the best way to provide the right kinds and mixture of ships? Should you do it by buying new ships, should you modify old ships, and so on.

Chairman PROXMIRE. Maybe in part, but is it not possible at all to consider it a kind of cost-agency comparison? In other words, if you find a good rate of return on shipbuilding, go ahead with it, where you do not on a water project that would show a comparable rate of return?

Mr. HOFFMAN. No, sir; I would have a great——