

vestment" implies the importance of time. Yet a zero discount rate assumes that time has no importance.

The same general phenomenon occurs in different forms in financing aviation investment. The Federal Aviation Administration, a component of the Department of Transportation, systematically employs discounting to determine the present values of future costs and benefits. Yet most investment in airports is made locally, on the basis of investment criteria which are typically unannounced even if they are known. Local airport finance may enforce some discounting rules in practice: An airport financed by revenue bonds must automatically convert some future benefits into cash flows and effectively discount these future cash flows by applying applicable rates of interest against them. But many airports are not financed by revenue bonds. Also, the very choice between revenue bonds and obligations pledging full faith and credit produces a further option in interest rates which may be used for discounting in addition to the option created by the fact that local obligations, free of Federal taxes, typically involve interest rates lower than those available to the U.S. Treasury.

Again, Mr. Chairman, the problems involved in the consideration of taxes in the discounting process have been considered rather thoroughly. I shall not go into those in any detail, except to say that in Transportation, there may be some basis for distinctions between the way we consider property taxes and the way we consider income taxes. This is because of the use which transportation facilities generally make of high-quality land which would be available for other uses if transportation facilities are not built, and also because of the relation of the benefits produced by certain transportation facilities to the locality in which the facility has to exist. This is a complication that we have to deal with. I do not have any particular solution to offer on how to cope with it.

Turning to the special case of railroad investment, the Department of Transportation operates the Alaska Railroad. The city of Cincinnati owns, but does not operate, the Cincinnati Southern. Otherwise, the railroad map of the United States is dominated by private ownership.

The next part of my statement gives us a little history of this. There are still massive problems for rail investment created by the competitive environment in which railroads operate. Many railroads are in a position to avoid payment of Federal income taxes on part or all of their income, due to tax loss carry forwards. This helps to improve their competitive position vis-a-vis public investment by reducing or eliminating the spread between their gross and their net return. But these tax loss carry forwards are also a factor in the growing phenomenon of footloose railroad cash. The roadbed may be immobilized, but the cash flow derived from depreciation, net income, and sale of miscellaneous assets is not. Therefore, the problem of railroad investment in the face of competition may be further subdivided into two different problems: negatively, competitive forces have cut into railroad earnings, and continue to hold them down; positively, the opportunity cost of converting railroad cash into railroad investment seems to be rising as alternative uses of the cash become relatively more attractive.

To sum up: The problem of discounting costs and benefits of new