

borrowers and the lenders. In this way, there would be assurance that the return on marginal investments of businesses exactly equals the rewards for marginal savings made by households. The optimal total amount of saving and investment would be determined through free choice in this process, and, leaving errors aside, the optimal combination of investment projects in the economy would be undertaken.

Economists differ in their assessment of the degree of correspondence between this ideal picture and the actual market economy as we know it. My judgment is rather far out on the spectrum of imperfections: as I have stated earlier, I assume "The capital market to be imperfect, to be rife with rationing, ignorance, differential tax treatments, reluctance to finance investment from external funds, slow adjustment processes, et cetera, which destroy the normative significance of actual rates found in the market." These imperfections, once acknowledged, give rise to two further concepts for interest rates which have received much attention in the academic discussions of interest rates for evaluating public investments.

(5) *The social rate of time preference.*—With no single market rate embodying marginal returns and marginal household preferences perfectly, and with the total savings of the economy not necessarily optimal, a new basis must be found for deriving a socially optimal interest rate. This problem is of particular significance in countries where investment is heavily government-determined, but it is of pertinence even in the United States.

Theorists have devoted considerable effort to the derivation of an optimal rate of social time preference, some would say an excessive rate. The rates have been derived from theoretical models of economic growth and postulated functions for the marginal utility of consumption over time. It is usually inferred from this literature that the rate of social time preference is low; that is, that the planner's interest rate should be low, giving full weight to the welfare of future generations and overriding the myopic desires of present individuals.

(6) A second concept which arises from the imperfections of the capital market is *the opportunity cost of public capital*: In the absence of a perfect capital market no one single actual interest rate can be used as a test to assure that the return of a public project will exceed the return of whatever other investment—or consumption—is forgone in its stead. It therefore becomes necessary to identify, on the most realistic analysis possible, what actual other investments—or consumption—are forgone, and what their return would have been.

In examining these forgone opportunities, and then identifying the opportunity costs, one must ask these questions:

(a) Where would the resources have been used in the absence of the particular public investment—in the public sector or in the private sector?

(b) If the resources are drawn from the public sector, that is, if the particular public investment is at the expense of other public expenditures within a fixed budget, what return would have been earned?

(c) If the resources are drawn from the private sector, are they obtained through taxation or through additional Government borrowing? If general fiscal policy considerations require that the additional resources be obtained through taxation, one must postulate a specific set of tax changes in order to identify what private expendi-