under these assumptions, is just equal to the individual's actuarial rate,

$$\frac{T'}{W},$$

where T', the accumulated amount of taxes plus interest over a working life is equal to P', the discounted value of pensions received over the years of retirement. Any ratio of the pension to the wage affects the social insurance tax rate and the individual's rate equally.

By way of comparison, individuals in 1967 could generally expect to get an interest rate on the order of 4½ percent on riskless forms of savings. The average rate of growth of "productivity" is on the order of 3 percent, depending on just how, and over what period, it is calculated. The expected rate of population growth (in age groups over 20) from 1965 to 2000 is just 1.5 percent.

There are, of course, various other influences affecting the comparison between social insurance and private saving for old age.[9] One of these is that that most private annuities and other forms of safe investments do not readily offer the individual the option of providing himself with a growing pension. However, the kind of comparison made above could also be made on the assumption that each individual retires with a pension equal to the wage (or some fraction of the wage) in his last working year. If everyone retired with a pension equal to the wage at the time *he* retired, the pay-as-you-go social insurance tax rate would be slightly lower, and so would the individual's "actuarial" rate.

More realistically, what is done in the United States is that Congress periodically takes a long-range (or intermediate-range) look at social insurance benefits and revises them upward on the basis of projections which assume continuation of the existing level of wages and a fixed scale of benefits. If this revision is done often enough, the "actuality" comes close, in its major relevant characteristics, to the model assumed above.

In one important respect, however, the above model differs from the actual situation: the model assumes a mature system in which everyone contributes for a full lifetime. In fact, the U.S. system is a long way from maturity both because few people have actually contributed for a working lifetime and because, as a result of liberalizations, far fewer people have contributed for a long period at a level of taxation consistent with the current level of benefits. This situation raises special problems.

PROBLEMS OF TRANSITION

The financing problems in a period of transition to a mature system depend upon the way in which transitional financing is arranged.

A social insurance system could be put into effect immediately with the same collective tax rate as under a mature system. Since it can be assumed that such a system would represent a taxing of all wages in one year to pay for the pensions of the retired population in that same year, the tax rate in the first year of operation would also be determined by the ratio of the retired to the working population (given the ratio

[9] Such matters as the absence of selling costs in a compulsory system will not be considered here.