

sumption that output is completely durable. Hence, the set of feasible distribution schemes in our new regime certainly contains the feasible set of the old regime. In particular, the set of all feasible stationary schemes must contain⁵ the shaded set in Figure 1, which appears in Figure 2 as the triangle OAC .

A brief look at Figure 2 tells the story: While in the old regime decentralized behavior led to an efficient but (in general) nonoptimal distribution scheme, in the new regime decentralization leads (in general) to an *inefficient* (to say nothing of optimality) distribution scheme.

This phenomenon, the inefficiency of decentralized behavior, does not disappear if we drop yet another assumption and permit capital (which in this model is in the form of inert inventories) to become productive. This has been shown recently by Diamond (1965).⁶ In Diamond's model, the inefficiency appears only if people "want to save too much" (in some well-defined sense). In the present model, people in the decentralized scheme *always* want to save too much, in the sense that the efficient distribution schemes involve zero inventories at every moment of time, while the decentralized scheme (in general) involves positive inventories at every moment of time. (In Diamond's model this is not always the case because, roughly speaking, as long as inventories reproduce faster than people, it is efficient to hold them.)

VII. FINANCIAL INTERMEDIATION

Thus far, we have avoided the question of how an efficient distribution scheme might be brought about. Is there an economic agent that could be introduced into the model and whose activity would ensure efficiency? Before attempting to answer this question we must probe a little further into the nature of the inefficiency of decentralization in the model of the foregoing section.

At the heart of the inefficiency in our new model (with durable output) lies the fact that decentralization forces people to hoard output in their first period so as to be able to consume what they had hoarded in the second period. The result is that in every period a fraction of total output is put aside in the form of a savings fund, to be carried over the next period. But, when the next period comes around and the older generation consumes its savings, the younger generation establishes its own savings fund and the economy ends up carrying a load of deadweight, in the form of output which is never consumed. Indeed, under the assumption of the same utility function for all, this load of deadweight keeps growing like a geometric progression, because the savings fund of generation t is $1+n$ the size of the savings fund of generation $t-1$.

The only way to restore efficiency to our system is to find an arrangement whereby the savings of generation t (when it is young) are used to provide for the consumption of generation $t-1$ (when it is old). In

⁵ Actually, the two sets coincide.

⁶ Note that the present model, with durable output, may be looked upon as a special case of Diamond's model, with the intensive production function (that is, the function relating output per man to capital per man) identically equal to unity.