Abstract: In the present study, we consider the problem affecting mandatory pay-as-you-go pension systems of several developed countries caused by the retirement of baby-boom generations. In the next decades this will be a relevant problem for mandatory pension systems because they will have to drain the “demographic wave” of retirees with, hence, a relatively small number of contributors. In many cases in which the contribution rate cannot be increased, because it is already too high, future pensions will become lower. In our work, we consider a Notional Defined Contribution pension system in stable state (see Angrisani and Di Palo, 2011), which, hence, is steadily able to pay current pensions with current contributions. We explain how this pension system has to face the turmoil produced by a demographic wave. Specifically, we consider the case in which the demographic wave problem is faced starting from its arising, namely when the demographic wave enters affecting the contributors group. We provide logically based solutions to this problem according to the logical sustainability approach (see Angrisani 2006, 2008). In literature, solutions of the demographic wave problem, which are “logically ensured”, do not exist. For example, in fact, the issue approach by means of stochastic simulations or with overlapping generations models does not provide logically ensured solutions.

Keywords: Public pension systems, demographic wave, sustainable rate of return.

Cited references


