

A Stochastic Approach to Increase Replacement Rates in Defined Contributions Pension Schemes

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The work presented here aims to show different strategies in order to increase the replacement rate obtained by a worker at retirement age. Usually, these strategies are set in a deterministic approach, but in this work we assume that the expected returns of the funds have a stochastic behavior. For this purpose, we take as basis the current accumulation model from a representative Latin American country as Mexico, from which we undertake sensitive analysis in order to optimize the asset allocation of the portfolio, the amount of the contribution rate and the age of retirement, to obtain a target replacement rate. The results suggest that a well-diversified portfolio, an age of retirement of 68 and a contribution of 10% of the salary, is the most effective strategy to follow.

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