

Stochastic dominance in retirement plans

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Retirement income tontines are retirement plans where benefits are obtained from the inheritance of non-surviving participants. This paper analyzes stochastic dominance relations between tontines and annuities. In the presence of risk loadings and/or subjective probabilities underestimating the insurer's pricing probabilities, we find the benefits of a properly designed tontine to dominate the benefits of a constant annuity in the almost first order stochastic dominance (AFSD) sense as defined by Leshno and Levy (2002). In particular, we show that this AFSD converges to first order stochastic dominance as the pool size in the tontine tends to infinity.