

## Quantitative Finance &gt; Risk Management

# Allocation d'actifs selon le critère de maximisation des fonds propres économiques en assurance non-vie

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The economic equities maximization criterion (MFPE) leads to the choice of financial portfolio, which maximizes the ratio of the expected value of the insurance company on the capital. This criterion is presented in the framework of a non-life insurance company and is applied within the framework of the French legislation and in a lawful context inspired of the works in progress about the European project Solvency 2. In the French regulation case, the required solvency margin does not depend of the asset allocation. It is quite different in the Solvency 2 framework because the target capital has to control the global risk of the company. And the financial risk takes part of this global risk. Thus the economic equities maximization criterion leads to search a couple asset allocation / equities which solves a stochastic program. A numerical illustration makes it possible to analyze the consequences of the introduction of a Solvency 2 framework on the technical reserves and the equities of a non-life insurance company and on the optimal allocation due to the economic equities maximization criterion. Finally, the impact of a misspecification of the risky asset model on the optimal allocation is illustrated.

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