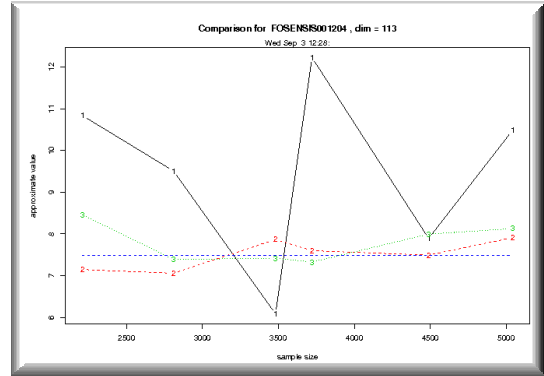


# Monte Carlo Methods

## Our Service

In our team you will find a key competency in the analysis and implementation of Monte Carlo and quasi-Monte Carlo methods in different fields of application. On that account we are able to choose well-suited methods for the situation at hand. In many cases, we can specify provable error bounds for the performance of the methods used.



Comparison of different Monte-Carlo methods

## Fields of Application

In Finance, simulations always gain in importance when complex models render the use of conventional methods impossible or when the latter require unjustifiable effort. This is the case for the

- prediction/assessment of complex portfolios;
- evaluation of complex and exotic derivatives and the determination of the *VaR* or of other *coherent* measures to assess risks.

## Key Benefits

We offer efficient algorithms that are suited to the problem at hand. Using various variance reduction strategies, particularly

- stratification
- importance sampling, also dynamic, and
- preconditioning by deterministic methods,

and object-oriented implementation, methods are made available to you that meet or even exceed international standards.

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