

**From Analysis to Stochastics: Applications of Ulrich Stadtmüller's  
Scientific Interests to Banking and Insurances**

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**Abstract:** Given a (non-linear) cost functional for the overall company, the overall cost has to be allocated to sub-units or even single deal basis. The key questions to be addressed are:

- Can we allocate in a way such that there are incentives for a cost-preserving portfolio management?
- Can we get smooth solutions?
- What can be done when no analytical solutions exist?

The methods used here are highly correlated to Ulrich Stadtmüller's scientific interests and give some insight what I learned from him.