

## **Big Data – a way forward in risk management**

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**Abstract:** In this talk, we would like to discuss the close relations of risk management and exploiting data for knowledge discovery, and present our view on their implications for banks, other financial institutions and risk intensive business areas in the context of new (Big) data sources becoming available internally due to operational data ware-housing and digitalization of internal documents, as well as externally due to online access to newspapers and the web. We will briefly describe the fundamental shift of paradigm from an essentially statistical towards a learning perspective that we expect to take place in the years to come. Analyzing its consequences, we will address the new aims that sometimes might appear incompatible, like unstructured information accumulation and privacy protection, and that will have to be reconciled during this transition process. We argue that regulation will have to play an important role to make this reconciliation possible, and attempt to show that under that premise, a substantial improvement on the status quo in risk management is possible, without creating new types of risks as a side effect. We will present some examples of the use of new data sources for risk management and explain the necessity to better understand normal as well as exceptional events.

The outline of the talk will be roughly as follows:

1. Risk management as a key asset in the financial industry
2. The fundamental link between risk management and data analysis
3. New data sources: Enhanced in-house data and new publicly available data
4. New perspectives: From statistical analysis to learning
5. New risks: Privacy protection and the role of financial services
6. New regulation: Setting the ground for a level playing field
7. Examples using (Big) data for better risk management
8. Conclusion: What should be done, what can be expected?