

Operational risk management and measurement has been paid an increasing attention in recent years – namely due to the Basel II requirements that were to be complied with by all international active financial institutions by January 2008 and also due to recent severe operational risk loss events. This diploma thesis focuses on operational risk measurement techniques and on regulatory capital estimation methods. A data sample of operational losses provided by a Central European bank is analyzed using several approaches. Multiple statistical concepts for the Loss Distribution Approach are considered. One of the methods used for operational risk management is a scenario analysis. Under this method custom plausible loss events defined in a particular scenario are merged with the original data sample and their impact on capital estimates and on the financial institution as a whole is evaluated. Two main problems are assessed in this diploma thesis – what is the most appropriate statistical method to measure and model operational loss data distribution and what is the impact of hypothetical plausible events on the financial institution. The g&h distribution was evaluated to be the most suitable one for operational risk modeling because its results are consistent even while using scenario analysis method. The method based on combination of historical loss events modeling and scenario analysis provides reasonable capital estimates for the financial institution and allows to measure impact of very extreme events and also to mitigate operational risk exposure.