



The use of data in DRF – a brief overview

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Abstract

- Effective financial planning for disasters requires good quality data and analysis
- Limited data and some basic analysis may be sufficient to gain initial insights into potential disaster losses and start the planning process
- Probabilistic risk assessment can provide a more accurate picture of potential losses, and is usually necessary for some financial products such as insurance

3 key questions on data:



What type of data do you need?



Where can you find the data?



Is the data **fit** for purpose?



THE VALUE OF ANALYTICS IS ONLY AS GOOD AS THE DATA THAT FEEDS INTO IT

I. What type of data do you need?



Risk / loss
data



Macro-
economic data



Fiscal /
financial data



**BIG DATA SETS DOES NOT
ALWAYS EQUATE TO USABLE
INFORMATION**

II. Where can you find the data?



Government
Agencies



Public
Sources



Humanitarian
Organizations



Risk Model
Firms



Insurance
Companies



Adjustments to combine data
from multiple sources



Scaling data to
current time period

III. Is the data
fit for purpose?



De-trending to remove trends
in historical data over time



Removal of unreliable
data points

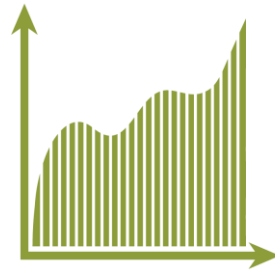


**LIMITATIONS OF ANALYSIS GIVEN DATA
FITNESS AND APPROPRIATENESS**

Analytics translates data into useful information



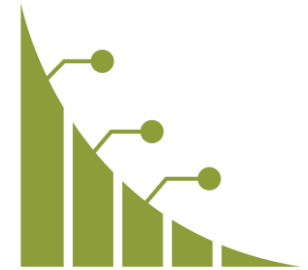
What is probabilistic risk assessment?



Technical statistical analysis using limited historical data

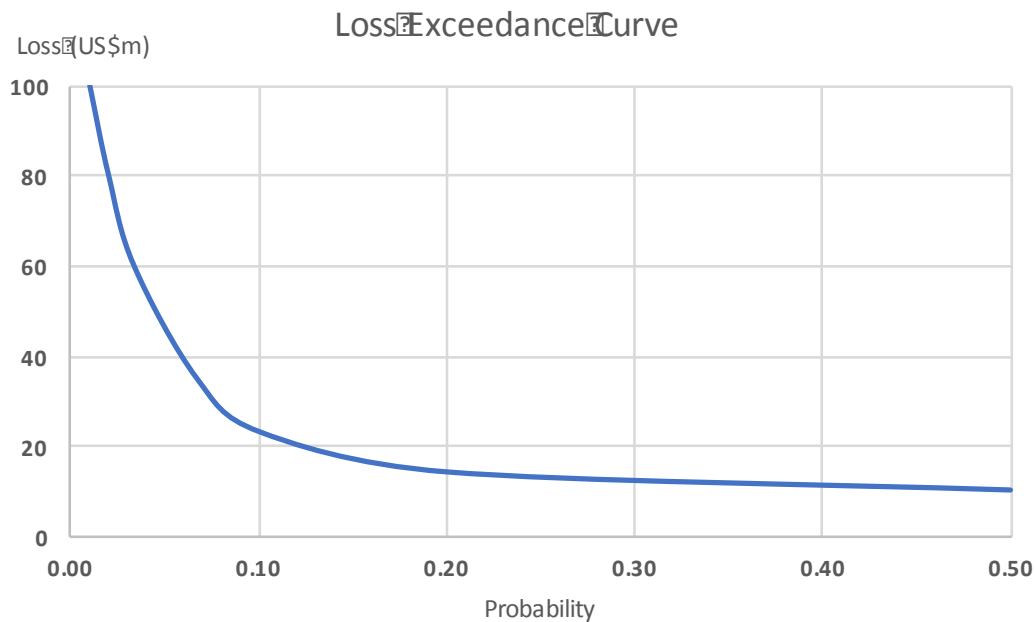


Estimating a large number (e.g. 10,000) potential future events



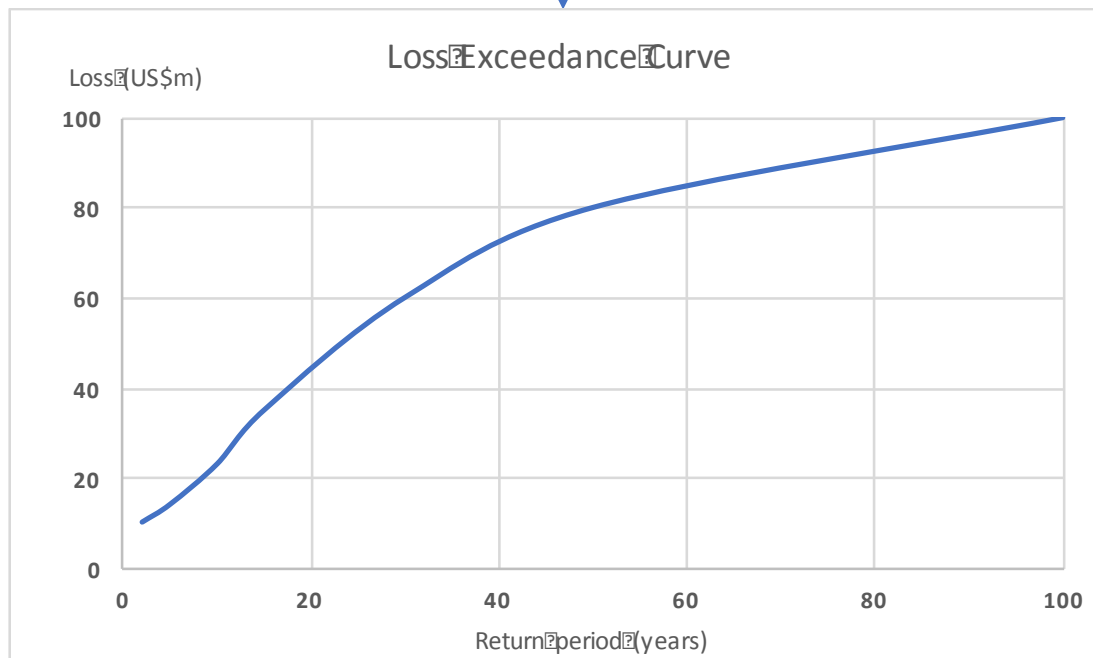
Statistical measurements (such as average annual loss) based on the estimated potential future events

Presenting potential disaster losses – a Loss Exceedance Curve (LEC)

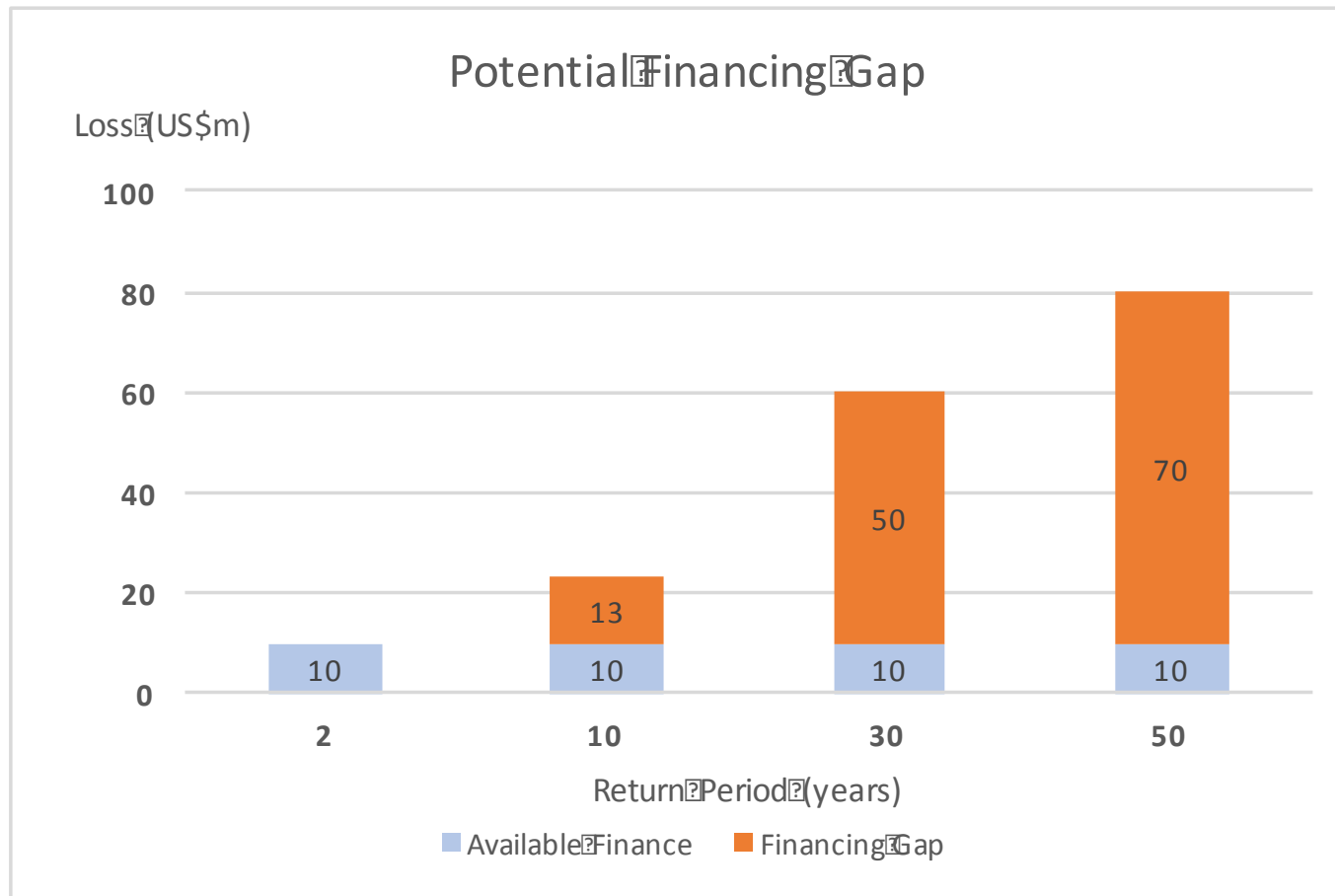


Type 1: x-axis showing probability

Type 2: x-axis showing return period = 1/probability



The 'financing gap' = potential disaster losses *minus* available finance





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