Quantify legal and compliance risks from zero to hero Prof. Hernan Huwyler

**#RISKAWARENESSWEEK2021** 

@hewyler



#### 1- The what

Compliance risks internal and external obligations ISO 37301:2021

Legal risks
legal and contractual obligations
ISO 31022:20210







It's all about corporate defense



Anything worth doing is worth doing poorly at first



Sell stories, buy statistics









Anything worth doing is worth doing poorly at first



Sell stories, buy statistics

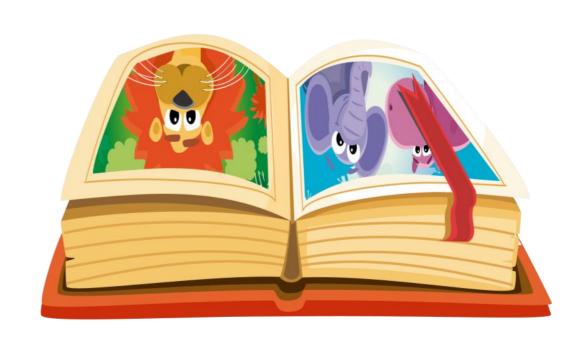








Anything worth doing is worth doing poorly at first



Sell stories, buy statistics

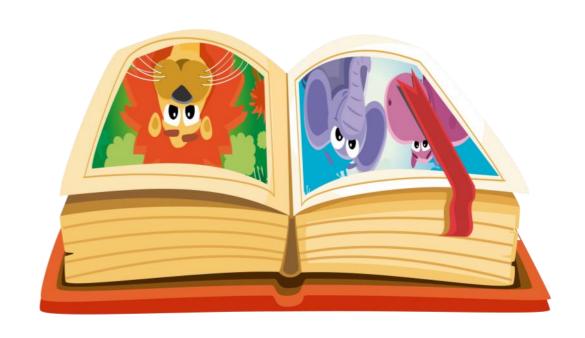








Anything worth doing is worth doing poorly at first



Sell stories, buy statistics



#### 3- The how

- Decision trees
- Monte Carlo Simulations
- Calibrated estimates
- **%** Histograms
- Loss exceedance curves

#### First tier losses

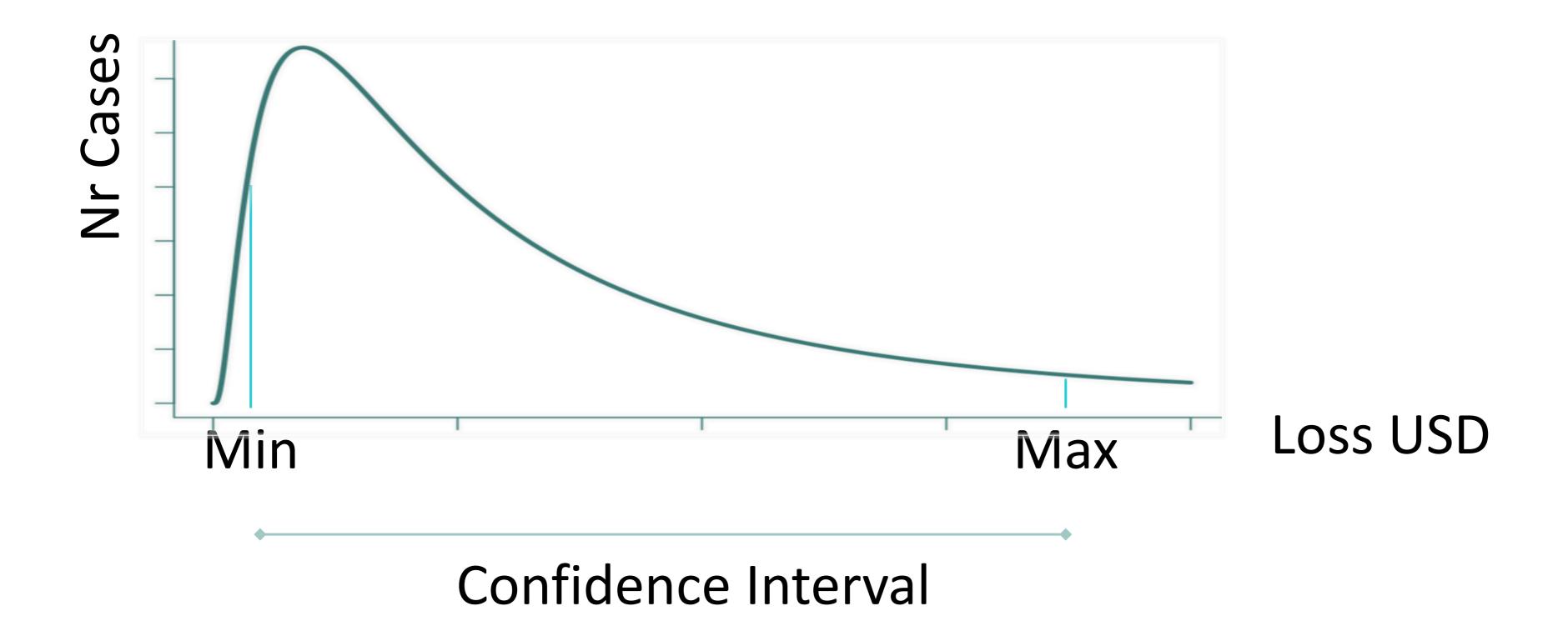
- Penalties and indemizations
- Fines and sanctions
- Legal and remediation costs

#### Second tier losses

- Loss of customers
- Marketing depreciation
- Loss of licences
- Stock price



#### 3- The how





#### 3- The how

Single Loss USD = 
$$\frac{\ln (Max) + \ln (Min)}{2}$$
,  $\sigma = \frac{\ln (Max) - \ln (Min)}{Standard Error}$ 

# ⊭LOGNORM.INV(RAND(),(LN(Max)+LN(Min))/2,(LN(Max)-LN(Min))/standard error))

8	Confidence Interval	Standard Error
<u>*</u>	80%	2.56
z*-value*2	90%	3.29
<b>}</b>	95%	3.92
N	99%	5.15



# Tool Demo

Monte Carlo Simulation-based model for legal and compliance risks

#### Tool to assess compliance and legal risks

#### **Business cases**

- **RA Housing Maintenance Code** provides for a civil penalty of a minimum of \$1,000 with a maximum of \$3,000 for lead violations
- **A Copyright Infringement Law** sets penalties of \$200 to \$150,000 for each work infringed and attorney's fees and court costs
- **A Privacy Regulation** imposes fines in the range from \$100 to \$50,000 per violation, with a total of \$25,000 to \$1.5 million for all violations of a single requirement in a calendar year
- **RA contractual clause** sets a penalty for invoices received beyond the 2 months after a compulsory deadline. It applies an immediate penalty of 5% of the value of the invoice per month of delay with a minimum of \$200 penalty up to a maximum of 30% of the value of the invoice



#### Let's connect



## Twitter @hewyler

Skype @hewyler

LinkedIn in/hernanwyler/