



One Atlanta Plaza, Suite 2160  
950 East Paces Ferry Road NE  
Atlanta, GA 30326-1384  
Phone: 678-732-9112  
www.risklighthouse.com

## Quantify Operational Risk Capital Levels with OPERisk Model From Risk Lighthouse LLC

August 31, 2010

Risk Lighthouse LLC is pleased to release its operational risk model (OPERisk) for calculating capital requirements. This excel-based model combines advanced actuarial/statistical theory with cutting-edge programming in accordance with specifications of the Basel II Advanced Measurement Approach.

### Input stream:

- 1) A menu to select built-in industrial loss severity curves
- 2) A client-specific internal survey of potential loss frequency and severity
- 3) A client-specific internal historical loss incidents data
- 4) A selection of various modeling parameters

### *Main Dashboard for Input and Output Interface*

The screenshot shows a software window titled "Operational Risk Capital" with a menu bar containing "Calculation", "Chart", "Advanced", and "About". The interface is divided into two main sections: "Inputs" and "Results".

**Inputs Section:**

- Step 1: Industry (dropdown menu)
- Step 2: Survey (dropdown menu)
- Step 3: Historical Loss (dropdown menu)
- Step 4: Uncertainty (dropdown menu)
- Optional: Confidence Level (input field) %

**Results Section:**

- 99.9% (input field)
- 99% (input field)
- 95% (input field)
- 90% (input field)
- 75% (input field)
- 50% (input field)
- Confidence Level (input field)
- Mean (input field)
- Standard Deviation (input field)
- Skewness (input field)

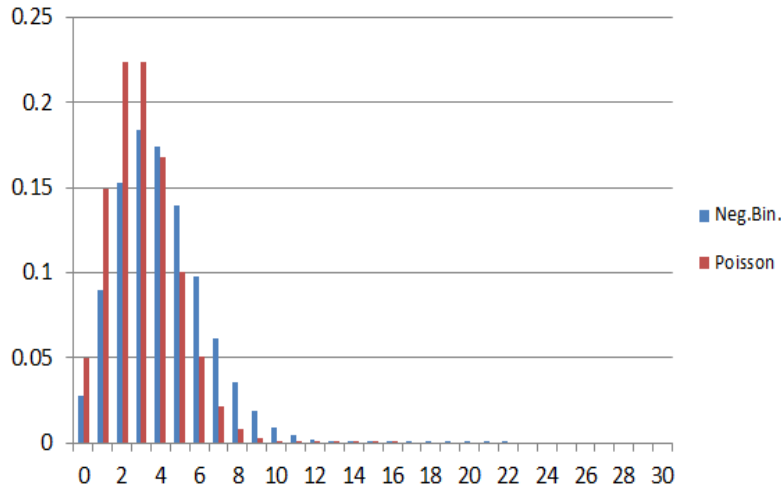
At the bottom of the interface are three buttons: "Calculate", "Clear", and "Exit".

### Methodology:

- ✓ Frequency-severity loss distributional approach
- ✓ Poisson and Negative Binomial frequency distributions

- ✓ Pareto and Lognormal severity curves fitting
- ✓ Run-time reduction by use of Panjer recursion for computing aggregate loss distribution
- ✓ Wang Transform application to adjust probability distributions

*Visualization of Poisson and Negative Binomial Input Selections*



**Output:**

1. Aggregate loss distribution with summary statistics,
2. Stress and sensitivity tests,
3. Sensitivity of capital requirement to input parameters, and
4. Facility to easily export of tables and charts for generating reports.

**Computer Requirements:** Desktop/Laptop with Windows XP, Windows Vista or Windows 7

Disk: 2 GB  
 Memory: 1GB  
 Speed: 1.20 GHz  
 Software: Microsoft Office 2003, 2007, or 2010

**Who can run the model?** A college graduate who has taken courses in calculus and statistics is able to run the OPERisk model.

**For more information,** contact Ms. Teresa Winer at:

Risk Lighthouse LLC  
 One Atlanta Plaza, Suite 2160  
 950 East Paces Ferry Road NE Atlanta, GA 30326-1384  
 Phone: 678-732-9112  
 Email: operisk@risklighthouse.com