

Cambridge Judge Business School

Cambridge Centre for Risk Studies 2018 Risk Summit

ENTERPRISE PERSPECTIVE OF CORPORATE RISK

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Cambridge Centre for Risk Studies

Centre for
Risk Studies



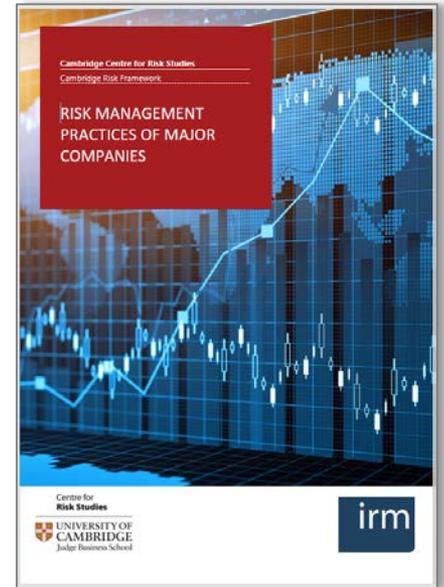
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Corporate Risk Profiling

- Overview and concepts of an enterprise view of risk
- Trends in corporate risk management
- Corporate Viability
 - Opportunities to address regulatory and reporting requirements
- Applications of Corporate Risk Profiling
 - Example of a top risk to an enterprise
 - Enterprise view of a company

CRS Corporate Risk Management Research

- Risk management practices of major companies - determine how they are adapting to meet future challenges and opportunities
 - Interviews/workshops with Corporate RM Directors
 - Cambridge CRO Council Roundtables
 - Focus groups with Corporate ERM Directors
 - Wide survey to RM professionals
 - Publication of selected sector specific case studies
 - Launch of report “**Risk Management Practices of Major Companies**” *forthcoming in Nov 2018*



Defining a Company from a Risk Perspective

- **Company** – Entity or group of people authorized to act as a single body and recognized as such by law.

Taxonomy of a Company

Strategy

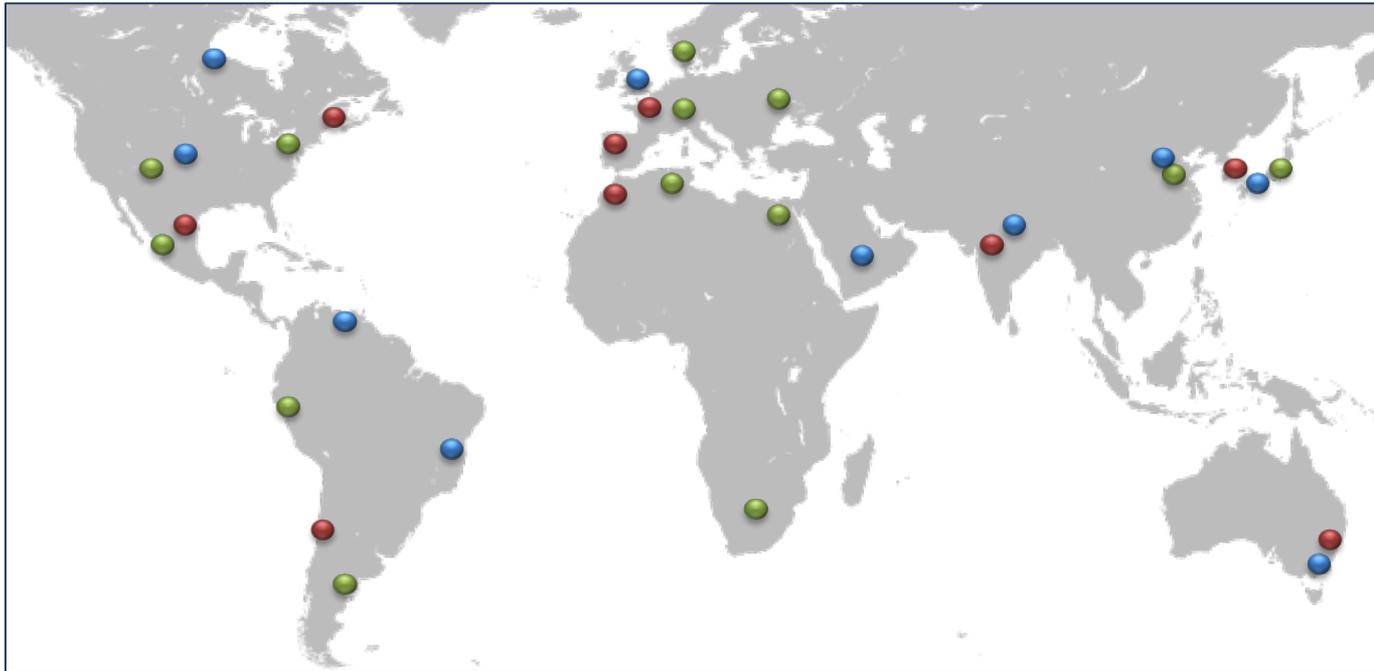
Culture

Talent

Systems

Settings

Concept: Corporate Risk Profiling



- Geographical dispersion of functions, operations, customers
- Perform large range of business activities
- Exposure to range of threats
- Legal and regulatory jurisdictions
- Counterparties and secondary supply chains

Challenges in Corporate Risk Management

Examples of Risk Management Practices:

	Incomprehensive	Inconsistent	Not Quantified	Not Holistic
Internal Risk Register	X	X	X	
Scenario Planning	X	X		
Insurance	X			X

Holistic and quantified framework: Lacking consistent or comprehensive model for identifying risks to the corporation, for comparing threats, for defining potential exposure and likelihood

- **External threats:** Internal view may be too narrow, short-term, or biased toward the probable
- **Methods and Metrics:** Lacking consistent methodologies for determining metrics for normalized view across enterprise
- **Geography:** Lacking model for evaluating risks to the corporation in relation to geography. E.g. Assets, counterparties, secondary supply chains, legal and regulatory jurisdictions

Catastrophe Modeling in Complex Systems

- The Centre for Risk Studies explores the intersection between
 - Catastrophe modeling and extreme risk analytics
 - Complex systems and network failures
- Advance the scientific understanding of how systems can be made more resilient to the threat of catastrophic failures

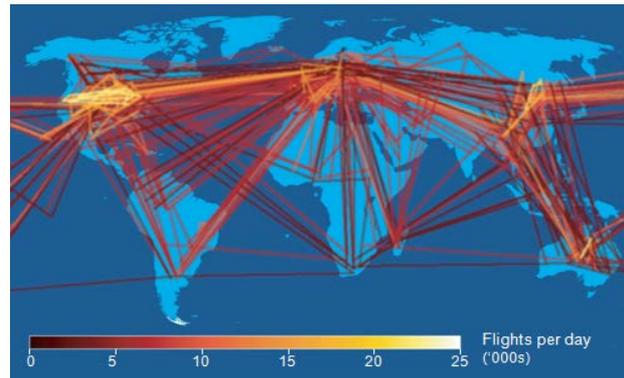
To answer questions such as:

'What would be the impact of a [War in China] on [Trade Networks] and how would this impact the [Global Economy]?'

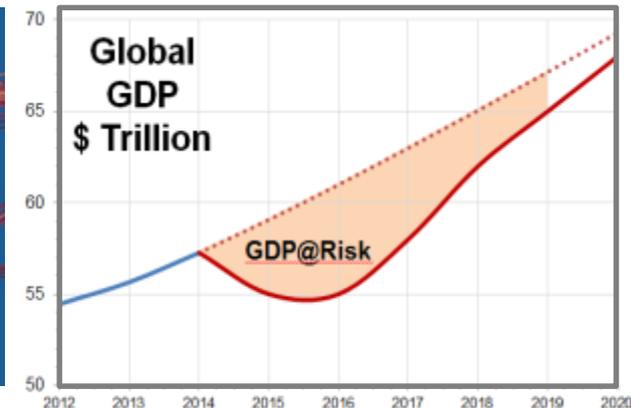
Regional Conflict



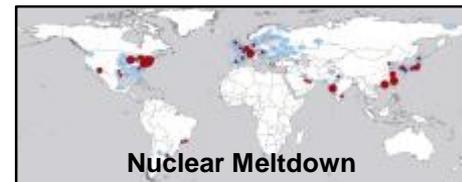
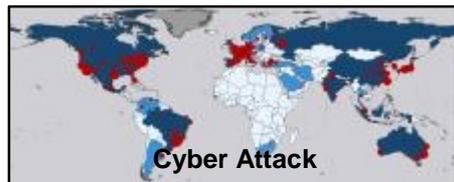
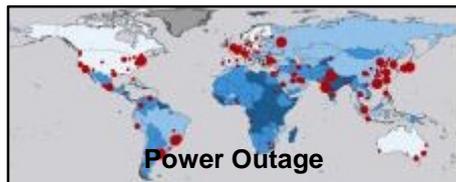
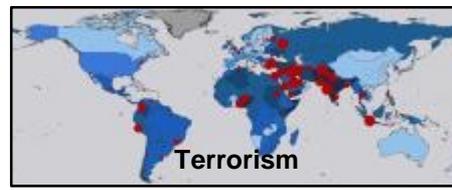
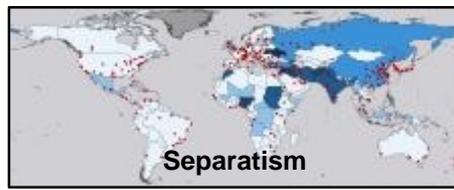
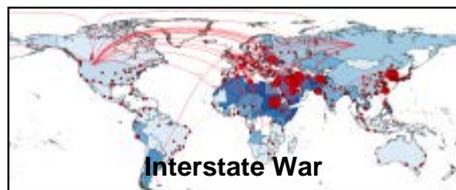
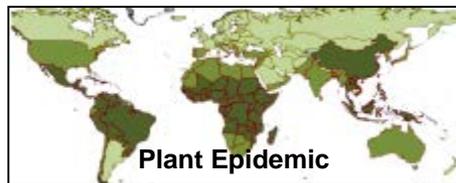
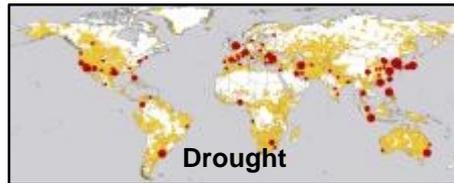
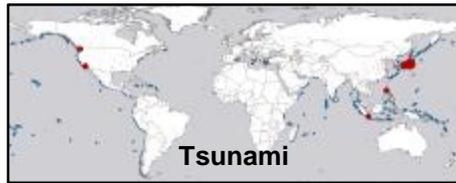
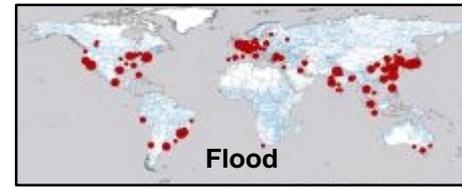
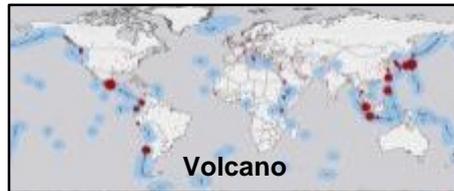
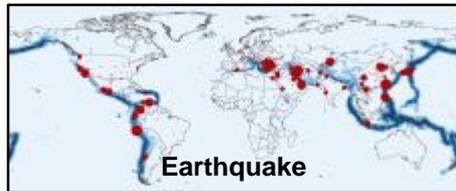
Air Travel Network



Global Economy



Geographical Mapping of All the Threats



Explore by city

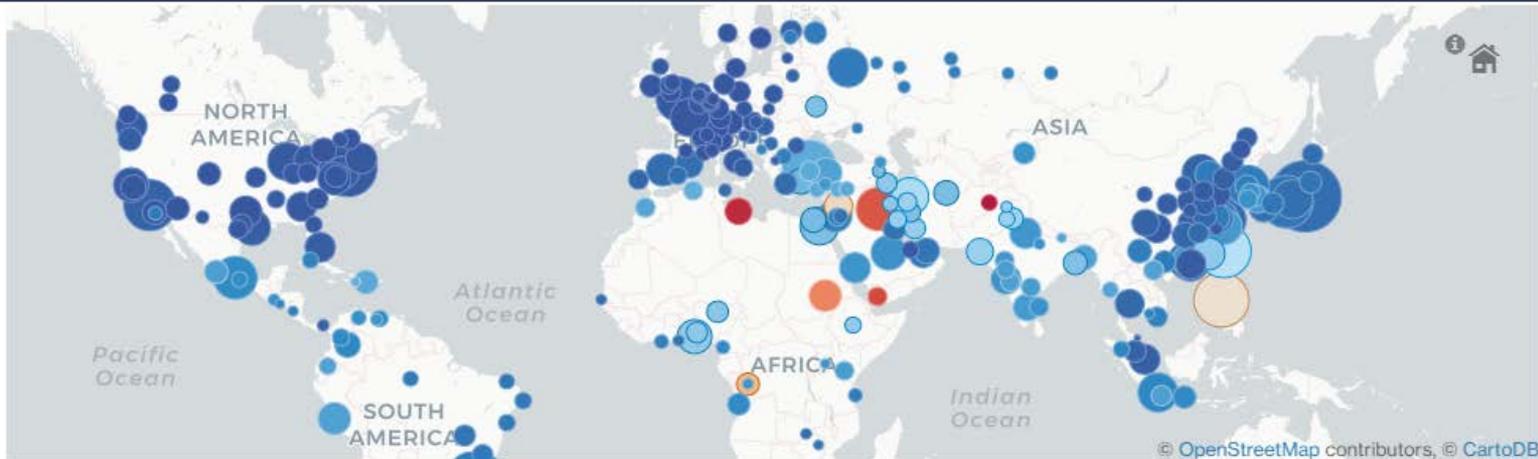
Explore by threat

Please use the map and charts below to explore the Lloyd's City Risk Index in more detail. You can make single or multiple selections in the filters. The map is interactive, meaning you can move around, zoom and select cities. When multiple cities are selected the charts show comparable or combined data. The scenario cost chart only appears (beneath the other charts) when a single city is selected.

Pick a region Pick a country Pick a city

Your selections: ClearAll Back Forward

City GDP (bn) ⓘ	GDP@Risk (bn) ⓘ	% of GDP@Risk ⓘ
\$35,404.22	\$546.50	1.54%



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Mapping Threat Taxonomy to Business

Threats to Business Output

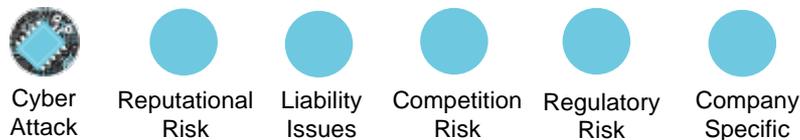
(Supply shock)

A. Site-specific threats to key facilities & assets



B. Risks that affect the whole company

Idiosyncratic – i.e. unlikely to affect other businesses at the same time



C. Systemic risks for sectors or all businesses

Will this business be affected more than average for sector?



Threats to a Company's Market

(Demand shock)

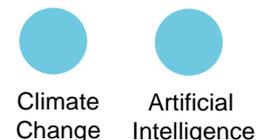
D. Threats to demand in a national market



E. Threats to demand in regional or global markets

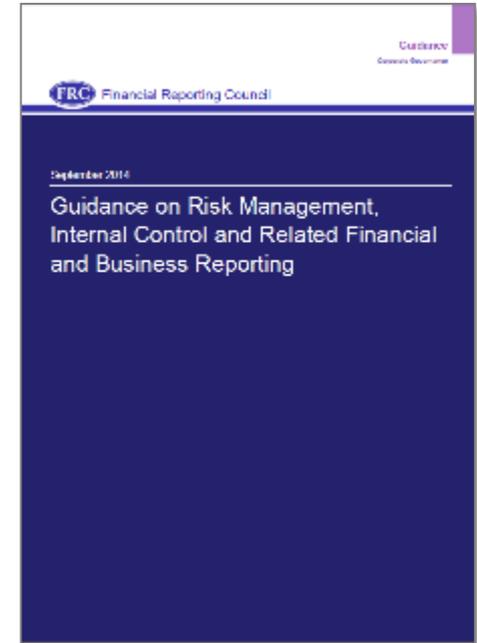


F. Trend risks that affect the company business model



Corporate Viability Risk

- Viability risk is a growing focus for corporations
- Recognition of viability risk - growing trend for international corporates to improve their risk reporting
 - Internal recognition: Corporate risk registers
 - External requirements: SEC 10-K in US, and Long Term Viability Statements in UK
 - Accountability to shareholders is becoming an increasing driver of executive concern
- Current movements
 - Move towards “1-in-100” risk reporting initiative for corporations



Regulation S-K, Item 503(c), SEC 2005

Where appropriate, provide under the caption “Risk Factors” a discussion of the most significant factors that make the offering speculative or risky. This discussion must be concise and organized logically. Do not present risks that could apply to any issuer or any offering ...

The risk factors may include, among other things, the following:

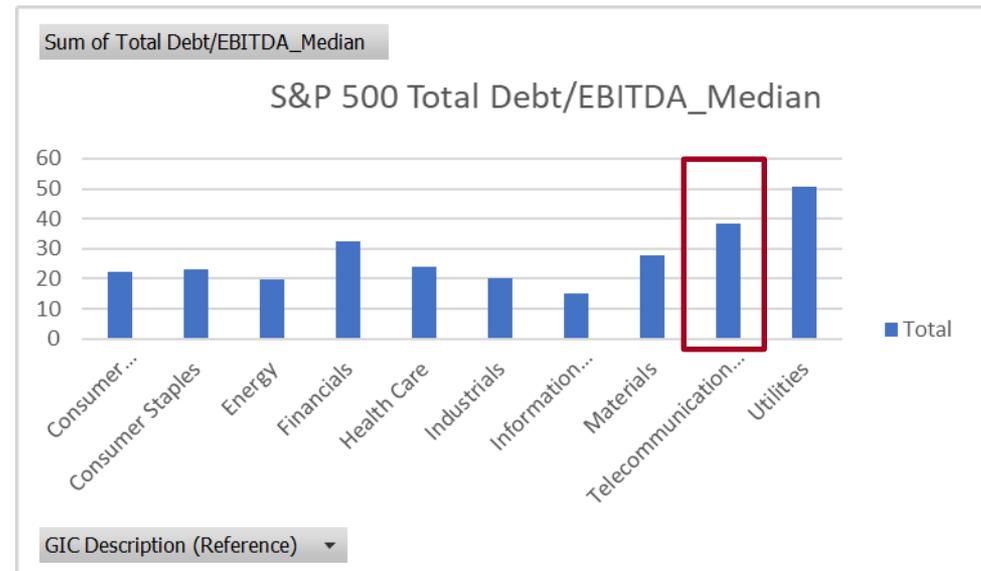
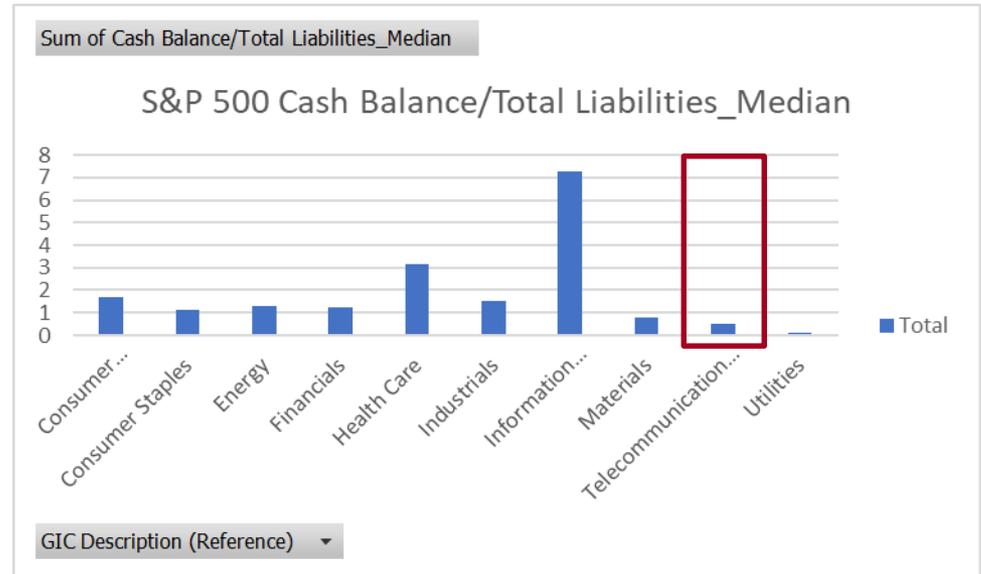
1. *Your lack of an operating history;*
2. *Your lack of profitable operations in recent periods;*
3. *Your financial position;*
4. *Your business or proposed business; or*
5. *The lack of a market for your common equity securities or securities convertible into or exercisable for common equity securities*

Assessing Corporate Health: Industry Financial Ratios

- **Capitalization:** measures the debt component of a firm's total capital structure, e.g.: Capitalization Ratio, Total Debt-to-Invested Capital Ratio;
- **Efficiency:** captures the effectiveness of firm's usage of assets and liability, e.g.: Asset Turnover, Inventory Turnover;
- **Financial Soundness/Solvency:** captures the firm's ability to meet long-term obligations, e.g.: Total Debt to Equity Ratio, Interest Coverage Ratio;
- **Liquidity:** measures a firm's ability to meet its short-term obligations, e.g.: Current Ratio, Quick Ratio;
- **Profitability:** measures the ability of a firm to generate profit, e.g.: ROA, Gross Profit Margin;
- **Valuation:** estimates the attractiveness of a firm's stock (overpriced or underpriced), e.g.: P/E ratio, Shiller's CAPE ratio;
- **Others:** Miscellaneous ratios, e.g.: R&D-to-Sales, Labor Expenses-to-Sales

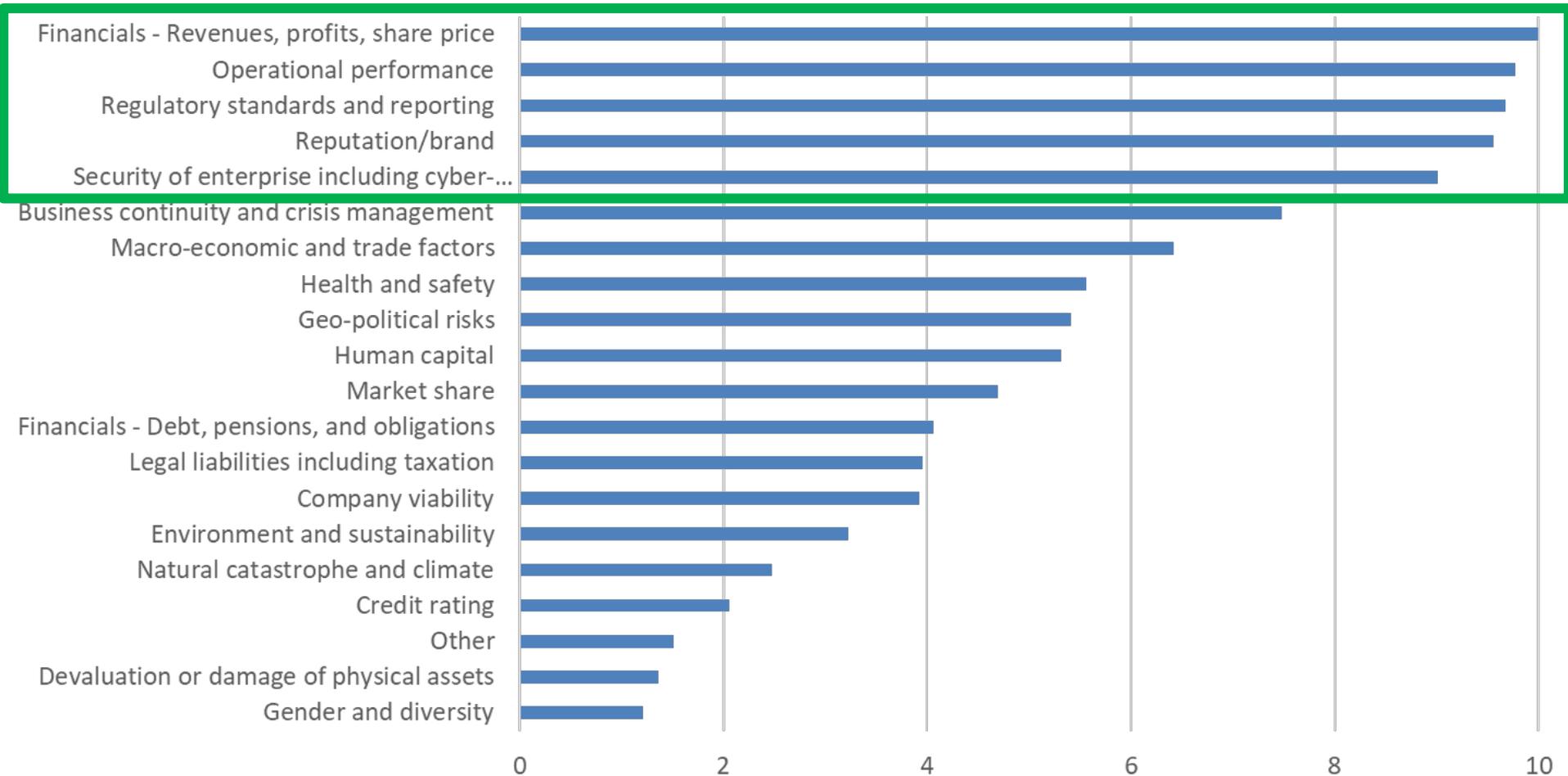
Example: Financial Soundness/Solvency

- Aggregate picture of financial soundness of companies to inform broader health of economy
- Analyse sector specific attributes and trends
- Benchmark companies within sector



Source: Compustat Quarterly Filings/CRSP/IBES/WRDS Industry Financial Ratio

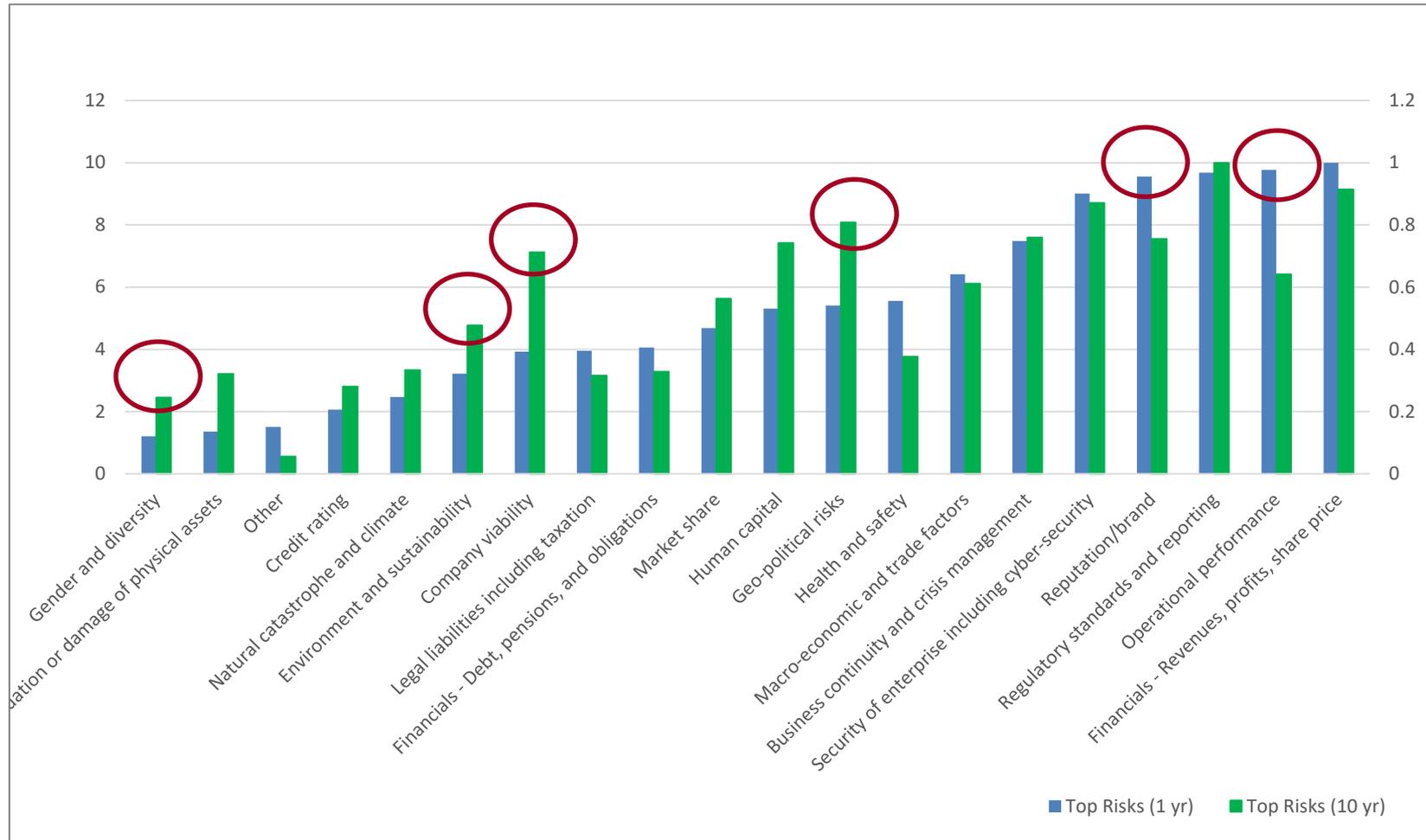
Top Risks Concerning Companies in the Next 12 Months



Data Source: Cambridge Centre for Risk Studies

Other Risks include: Fraud, Business ethics and anti-corruption, Anti-bribery, Third party oversight, Digital transformations. Note: Data from subset of survey respondents; final index subject to change

Short Term vs Long Term Top Risks



Data Source: Cambridge Centre for Risk Studies

Note: Data from subset of survey respondents; subject to change

Top Mitigations from Cambridge Survey

Please rank the top 10 most important risk mitigation strategies that are currently being planned at your company



Data Source: Cambridge Centre for Risk Studies

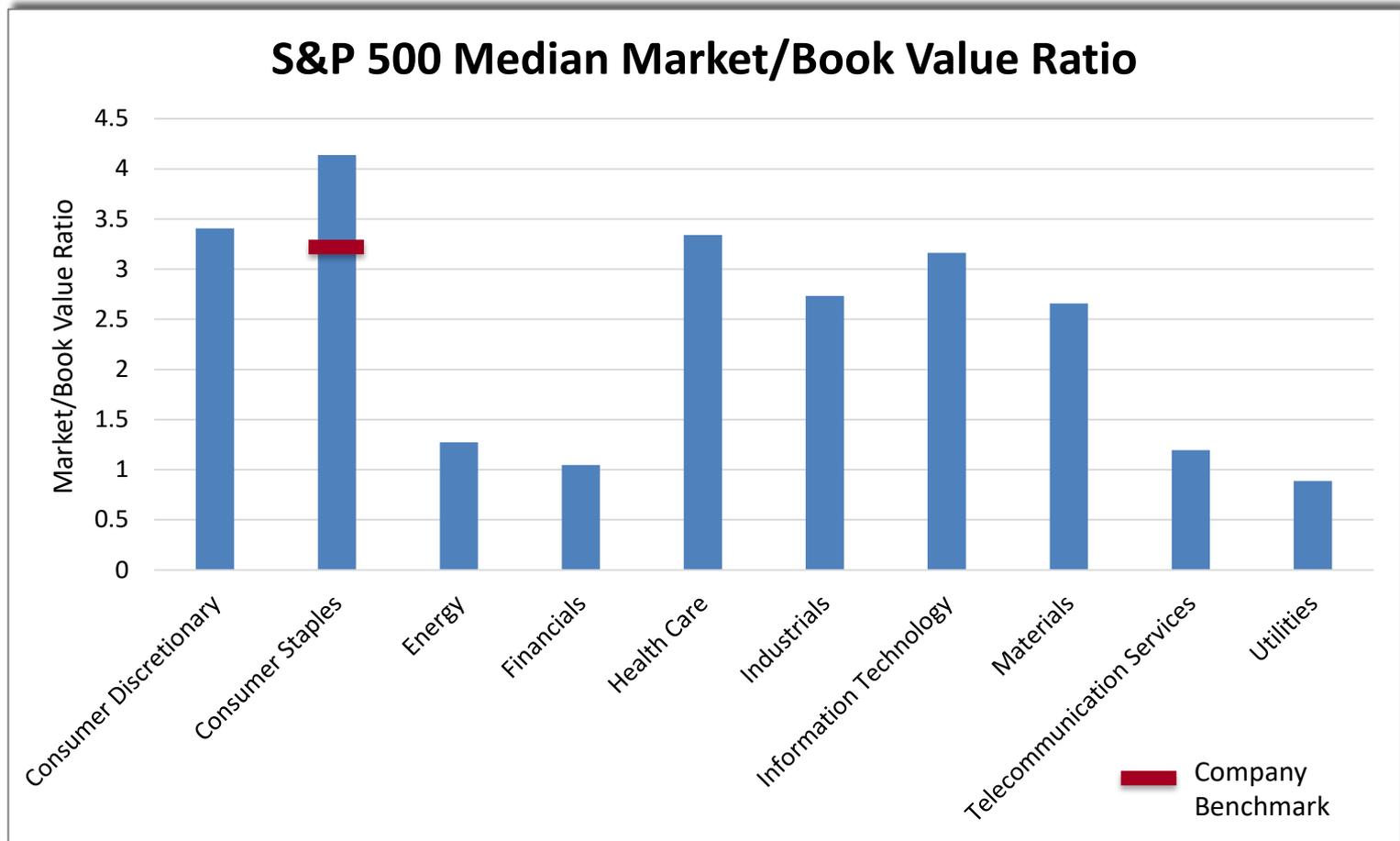
Note: Data from subset of survey respondents; final index subject to change

Top Risk by ERM Surveys: Reputation Risk

- Reputation risk is often reported as a top risk in ERM surveys vs 10-K filings
- Reputation is not reported on a company's balance sheet; e.g. intangible assets, goodwill
- A company's reputation factors into its current value of its intangible assets and its ability to create/destroy its future value
- A growing percentage of a company's market value is determined by intangible assets. Reputation is reported to be an important element of a company's intangible assets
 - It represents a proportion of the difference between market value and book value. [Gaultier-Gaillard, "Managing reputational risk – From theory to practice", Reputation Capital, 2009]

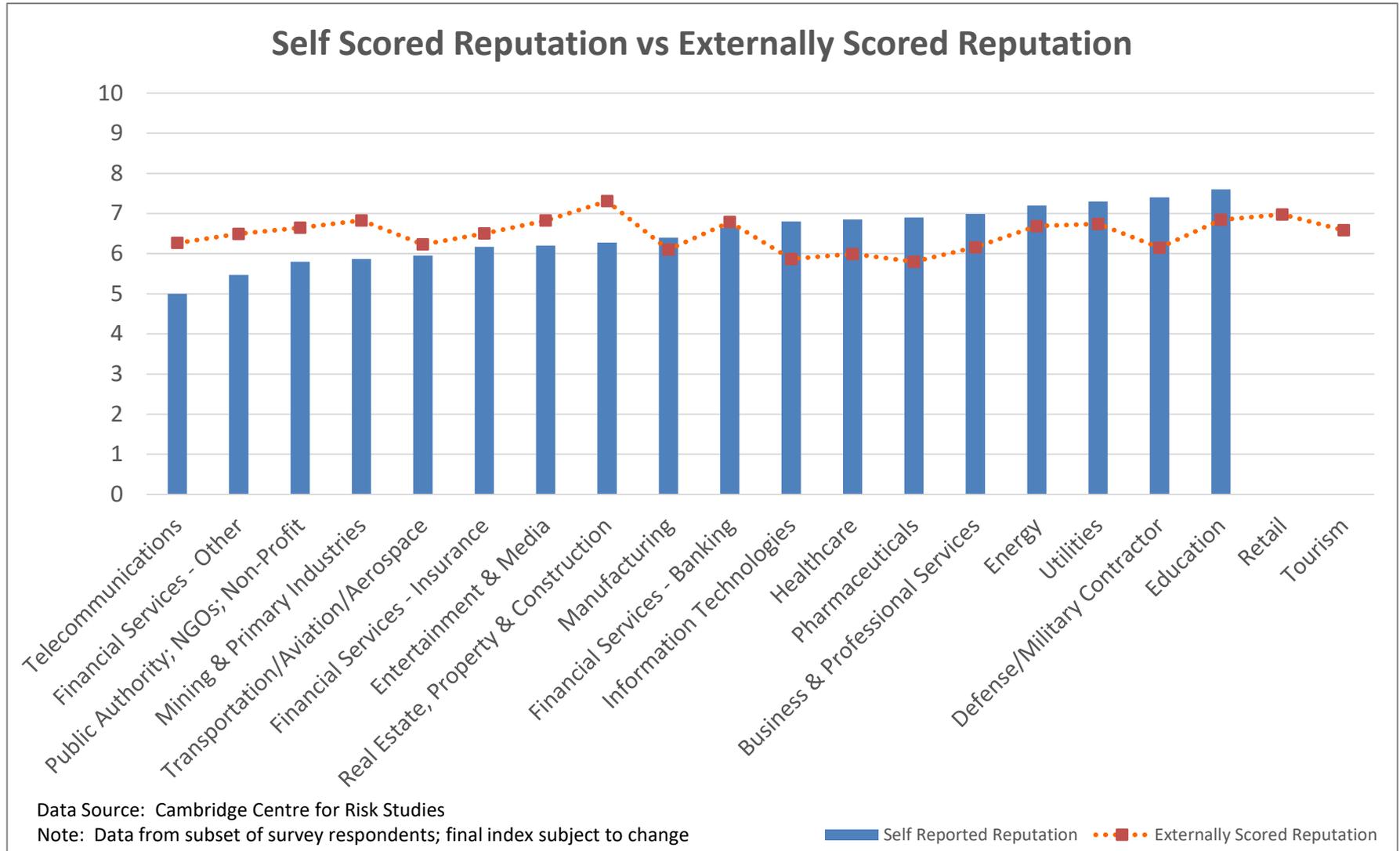
Top Risk: Reputation Risk

Proxies for Reputation Exposure



Source: Compustat Quarterly Filings/CRSP/IBES/WRDS Industry Financial Ratio

Comparative Reputation Assessments



Multi-disciplinary Description of Reputation

TABLE 1

Discipline-Based Conceptualizations of Reputation (see Fombrun and van Riel, 1997)

Discipline	Reputation	Source
Economic	Either traits or signals	Perceptions of firms held by external observers
Strategic	Assets and mobility barriers	Derive from unique internal features of firms
Marketing	Cognitive and affective meaning given to cues received about an "object" that is usually a product	Nature of information processing, resulting in "pictures in the heads" of external subjects
Organizational	Derives from an organization's culture and identity, which shape a firm's business practices and the kinds of relationships managers establish with key stakeholders	Rooted in the sense-making experiences of employees
Sociological	Aggregated assessments of firms' institutional prestige and describe the stratification of the social system surrounding firms and industries	Social constructions that come into being through the relationships that a focal firm has with its stakeholders
Accounting	The value of intangible assets	Investments in branding, training, and research build important stocks of intangible assets

Source: Nadine Gatzert, Joan Schmitt, Andreas Kold. Assessing the Risks of Insuring Reputation Risk, *Journal of Risk and Insurance*. Vol 83, No 3, pp641-679, 2016

Example: Market Offering for Reputation Risk

Brand Assurance - Brand restoration expenses

- Aggregate limit of \$100M
- Protection for crisis management and related costs.
- Crisis event must occur defined as one of 19 named perils
- Event leads to adverse publicity within 60 days; i.e. at least two high impact media outlets report crisis
- Results in financial loss in 1 of 4 ways
 - o Drop in revenues by at least 20%
 - o Reduction in price per share of at least 20%
 - o Lost of customers who represent at least 20% of insured's gross annual revenues
 - o Loss of suppliers whose input is critical in the production/provision of at least 20% of insured's gross revenues

Source: Nadine Gatzert, Joan Schmitt, Andreas Kold. Assessing the Risks of Insuring Reputation Risk, Journal of Risk and Insurance. Vol 83, No 3, pp641-679, 2016

Example: Market Offering for Reputation Risk

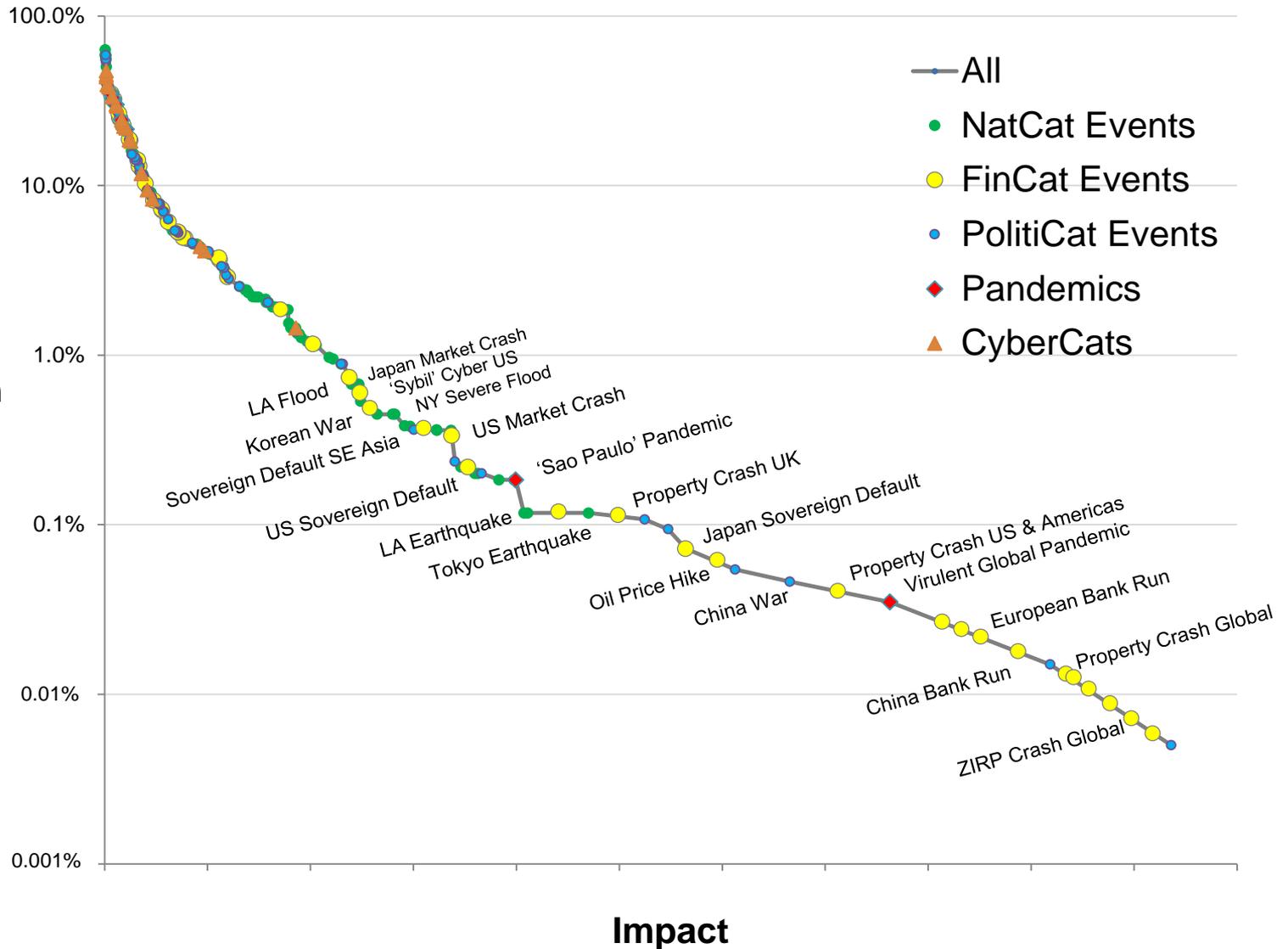
■ Reputation Risk Insurance

- Aggregate limit of 50M – 150M Eur
- Indemnifies for lost profits that result from crisis event
- Provides option to insure spill over
- Provides short-term liquidity to companies in case their products brands experience negative reputation events
- Allows organisation to continue functioning so they don't suffer further reputation damage.
- Financial loss is determined by an independent loss adjuster who determines revenue drop associated with crisis event

Source: Nadine Gatzert, Joan Schmitt, Andreas Kold. Assessing the Risks of Insuring Reputation Risk, Journal of Risk and Insurance. Vol 83, No 3, pp641-679, 2016

Corporation's EP

Probability of Occurrence in the next 12 months



Concluding Thoughts on Furthering the Resilient Corporation

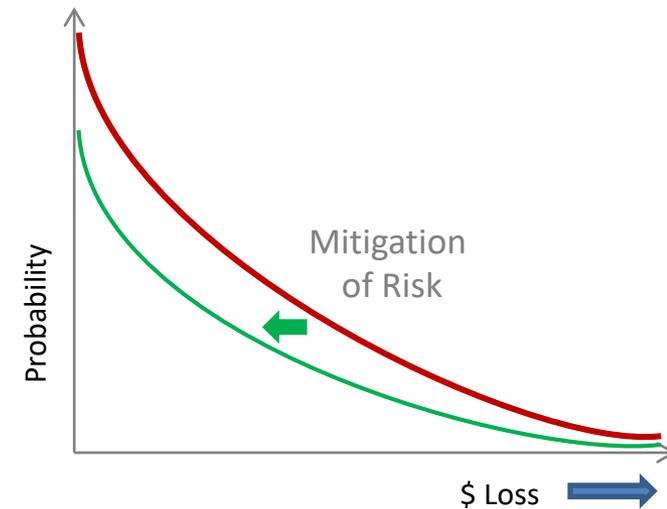
■ Challenges to the Corporations

- Changing global strategies and subsequent risk management plans
- Understanding its enterprise risks and communicating them via the balance sheet and overall value

■ Value of an enterprise risk picture

- EP curve can allow a corporation to optimise their “insurance” purchasing framework
- Identify the most cost-effective ways of improving its resilience
- Apply Risk Accounting to its processes
- Reflect risk savings on balance sheet

■ Increase transparency for corporations, risk transfer agents and capital markets



Taxonomy of a Corporation

Strategy

Culture

Talent

Systems

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Reactions

**LONDON
MARKET
AWARDS**

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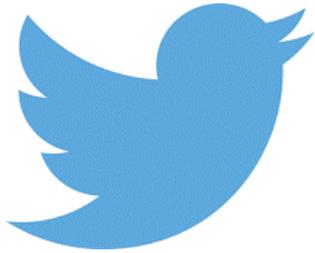
Shortlisted
for

Risk Modeller of the Year

2018

Social Media during the Risk Summit

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