

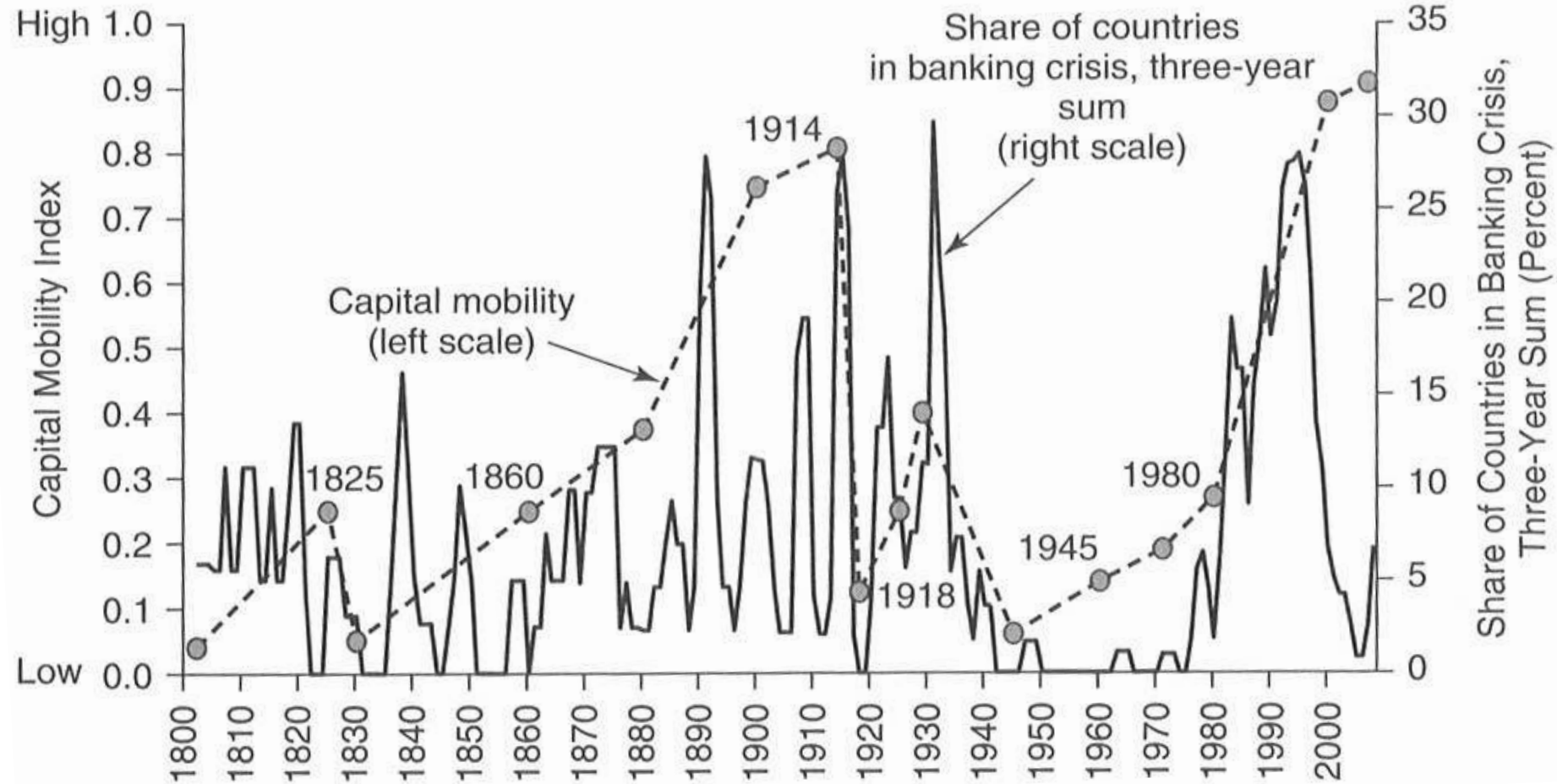


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**Dynamic Risk Assessment
Lead for the Americas**

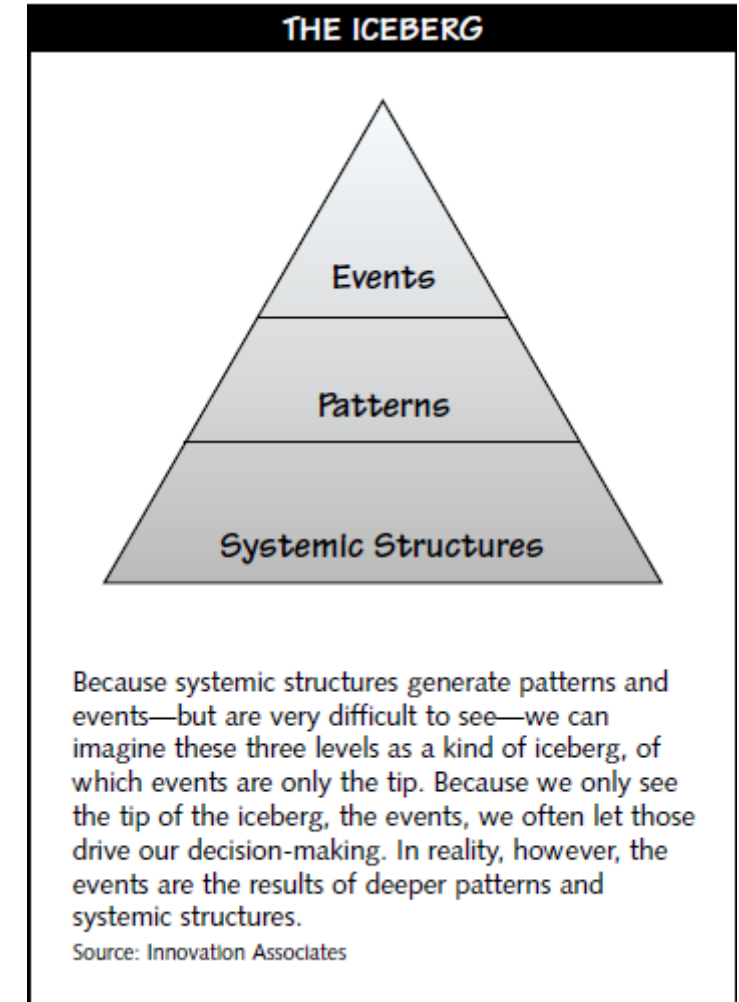
Capital mobility and the incidence of banking crises



Lessons from systems thinking

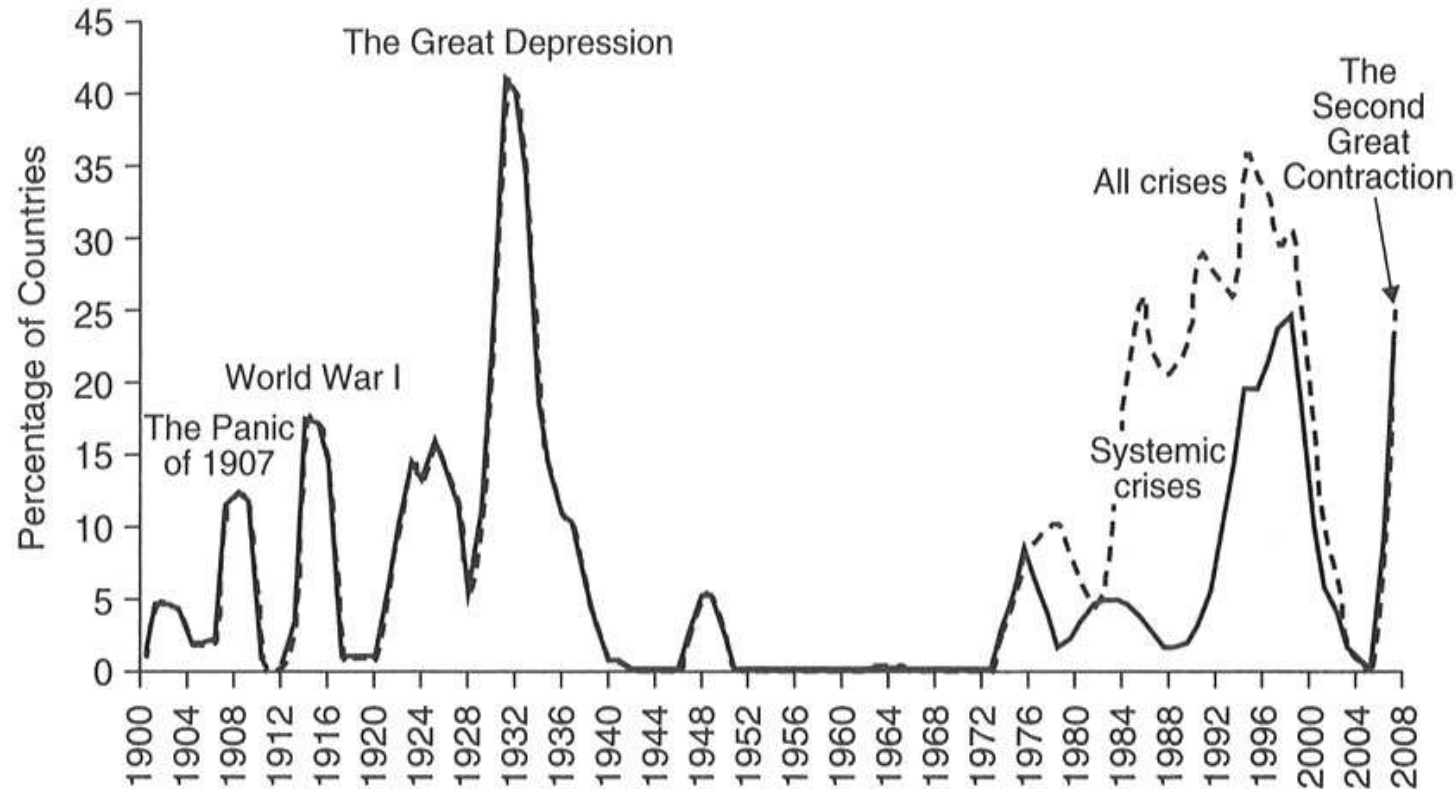
World Economic Forum (2018):

“Humanity has become remarkably adept at understanding how to mitigate conventional risks that can be relatively easily isolated and managed with standard risk-management approaches. But we are much less competent when it comes to dealing with complex risks in the interconnected systems that underpin our world, such as organizations, economies, societies and the environment. There are signs of strain (...), and when risk cascades through a complex system, the danger is not of incremental damage but of “runaway collapse” or an abrupt transition to a new, suboptimal status quo.”



Interconnectedness means dynamism

Crisis throughout history



Systems thinking lessons from the crisis:

- Linearity independence, and constancy cannot be assumed.
- We need to be forward-looking.
- Humility.

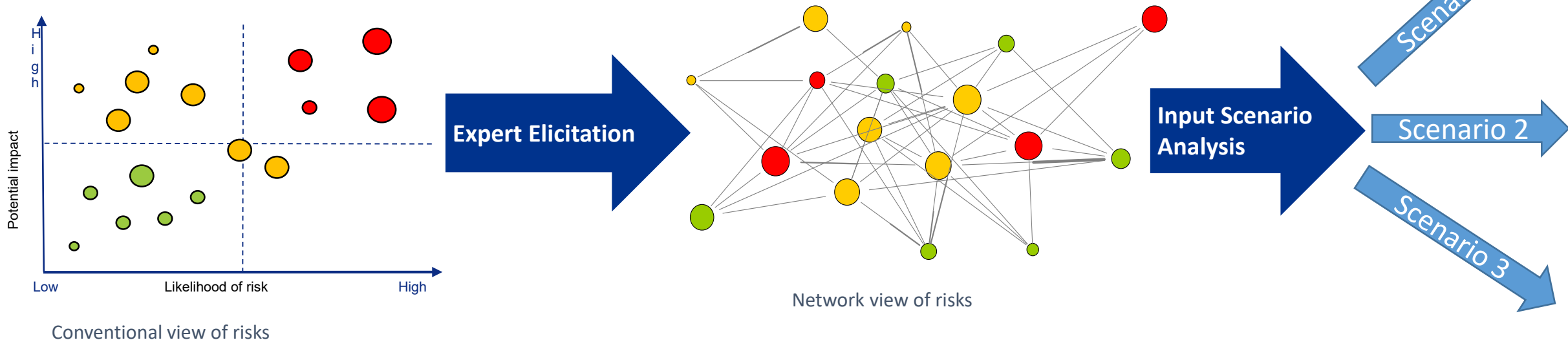
Tools in the age of connectivity

* Expert Elicitation

* Network Analysis

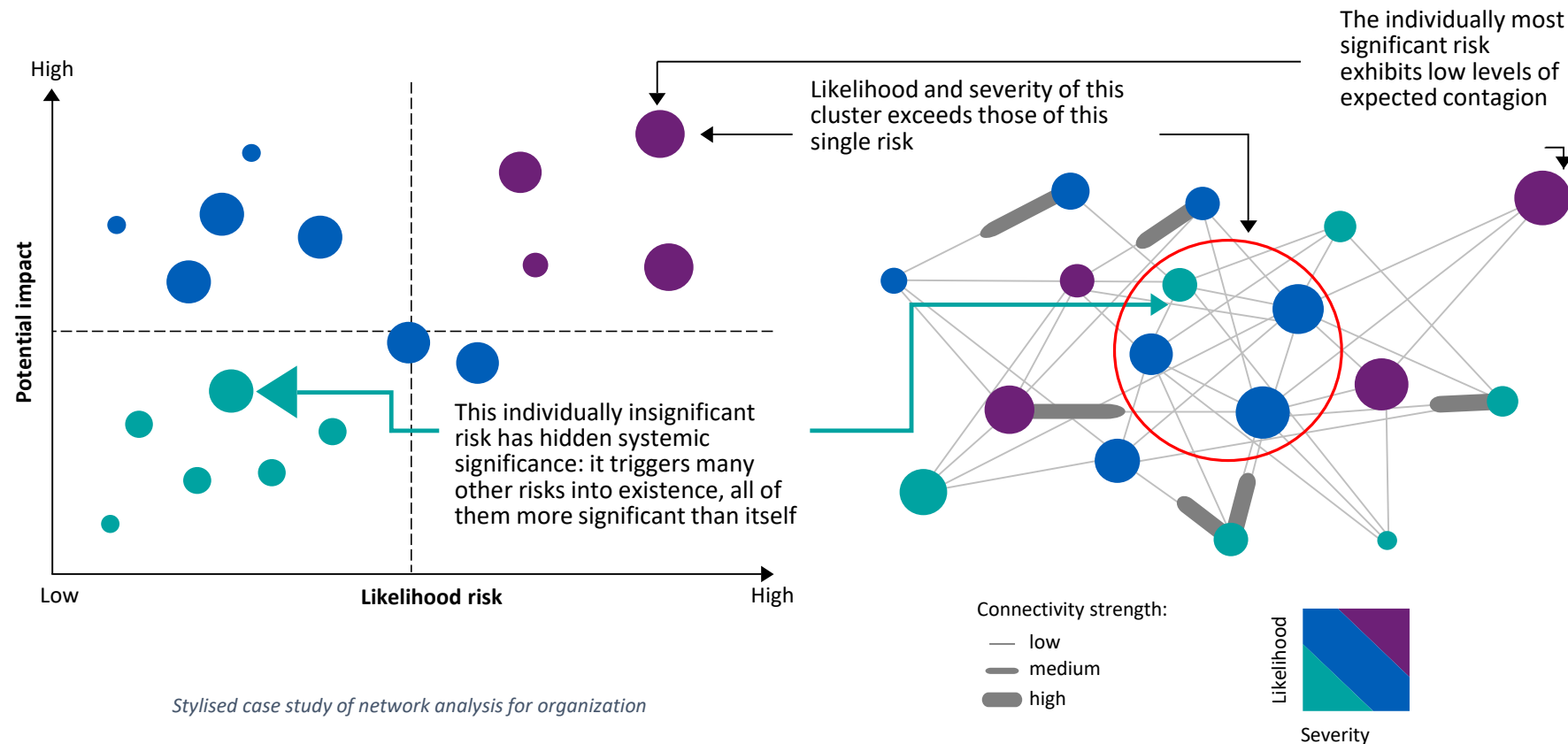
* Scenario Analysis

- KPMG uses the scientific method of **expert elicitation** to come to a forward looking network of risks. It is similar to what the WEF uses for its Global Risk reports.
- Using **network theory** KPMG investigates the structure, interconnectedness, and velocity of risks to provide a network view of a risk system to augment the view offered by conventional risk management.
- This then provides actionable output for strategy setting, and input for **scenario analyses**. It is not as precise as some statistical models, but a lot more accurate.



The Network View

Graph theory provides insights into whether individual risks can be expected to cluster together (interconnect) to form concentrations of risk events, and to determine where there is expected contagion. These mathematical functions do not add any assumptions (e.g., normally distributed errors or homoscedasticity) to the experts elicitation results.



Stylised case study of network analysis for organization