



DROUGHT TOOL PROTOTYPE DEVELOPMENT

And the impact on corporate loan portfolios

Stephen Moss, director, RMS

Background and Objectives

Most industries reliant upon water in some form – systemic risk (?)

Corporations ability to service loans therefore also dependant

70%

20%

Gaps in financial institutions' (FI) analytical capabilities

Currently, FI's quantification of environmental risk is limited

Difficult to translate environmental impact into loss

Location and certain financial data not utilised in analysis

Potentially systemic nature important for whole portfolio

Need to quantify portfolio's exposure and enable differentiation



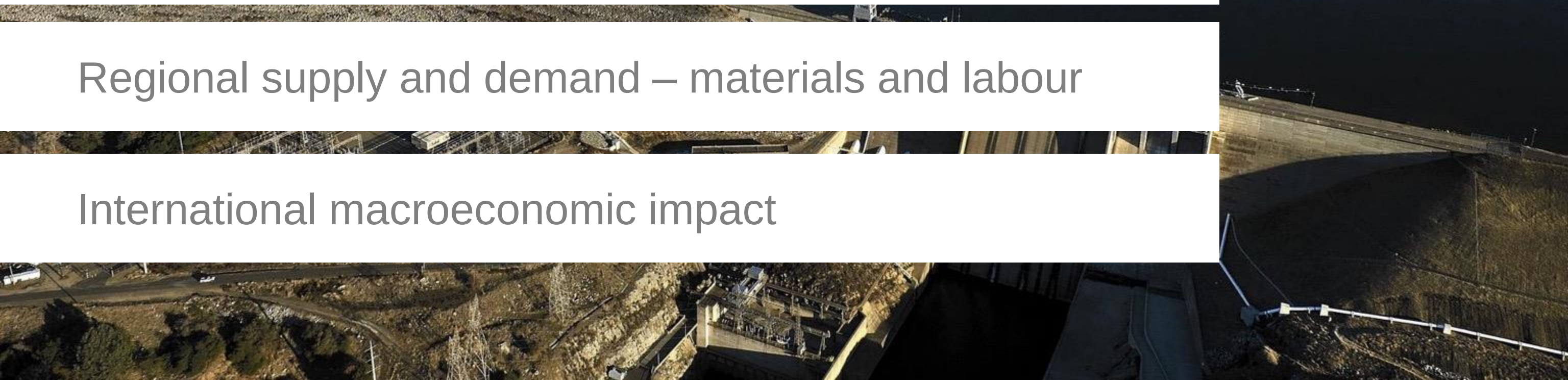
Interconnectivity

Direct water availability – key driver

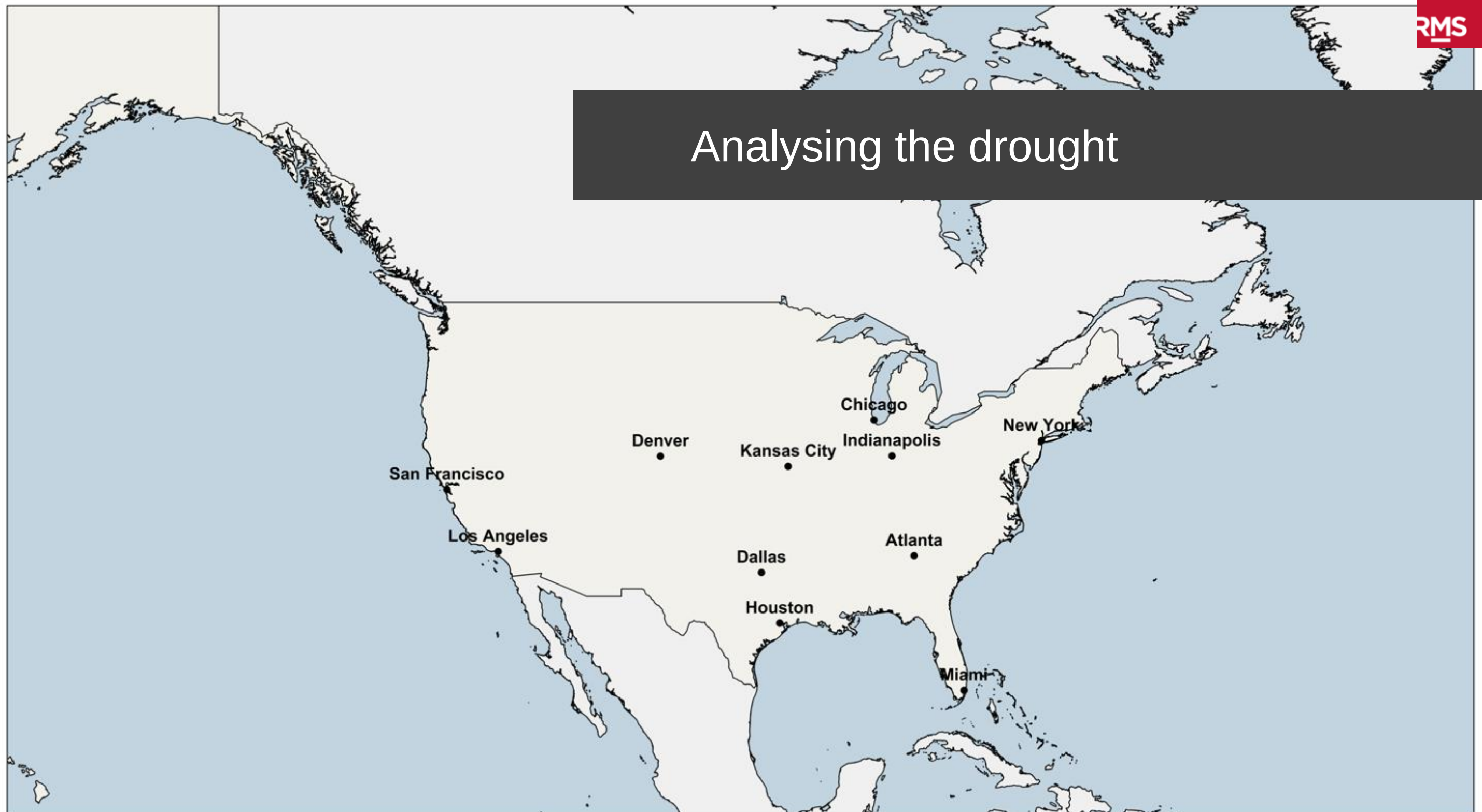
Power / electricity – dependant upon generation method

Regional supply and demand – materials and labour

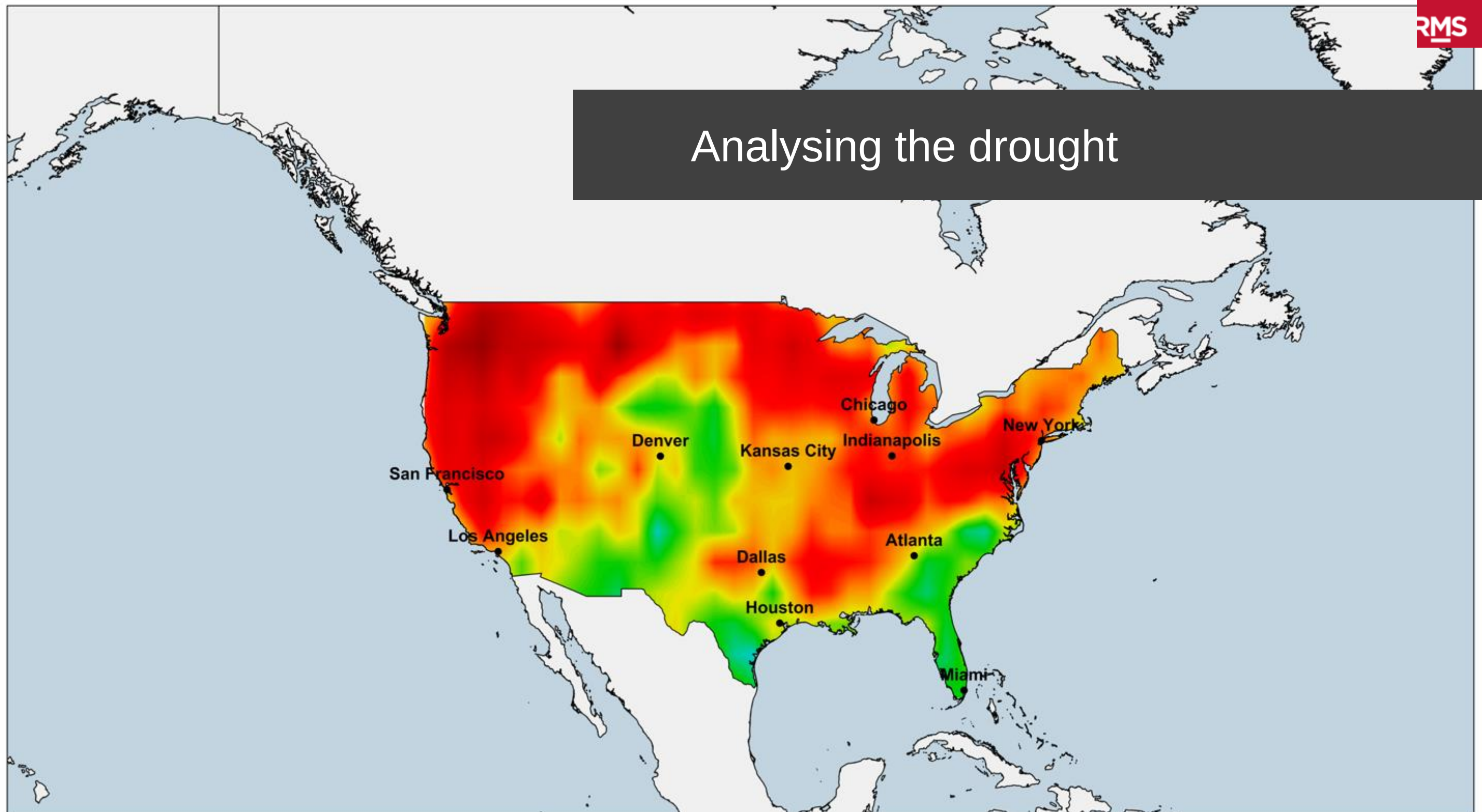
International macroeconomic impact



Analysing the drought



Analysing the drought



Approaching the loan default problem

How is the company directly affected?

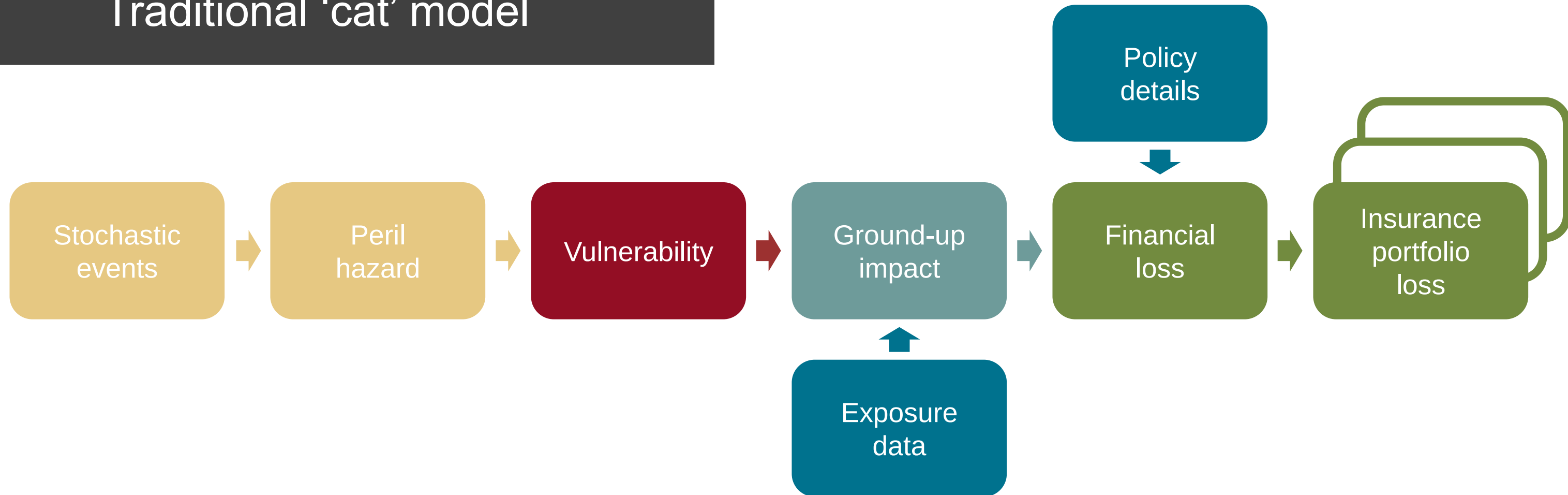
How is the company indirectly affected?

How does that impact revenue and cost of goods sold?

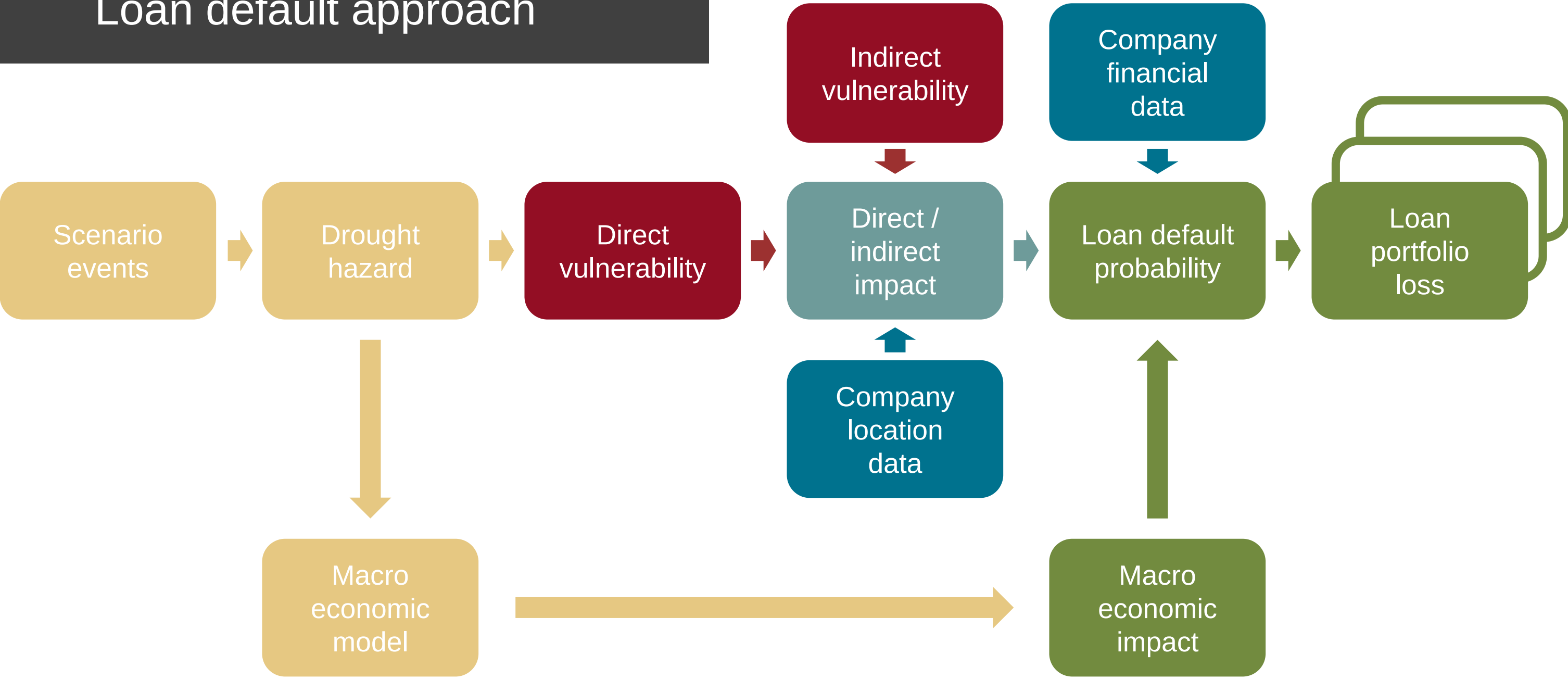
How does that change likelihood of default of specific loan?

What would be the cost to the FI of that default?

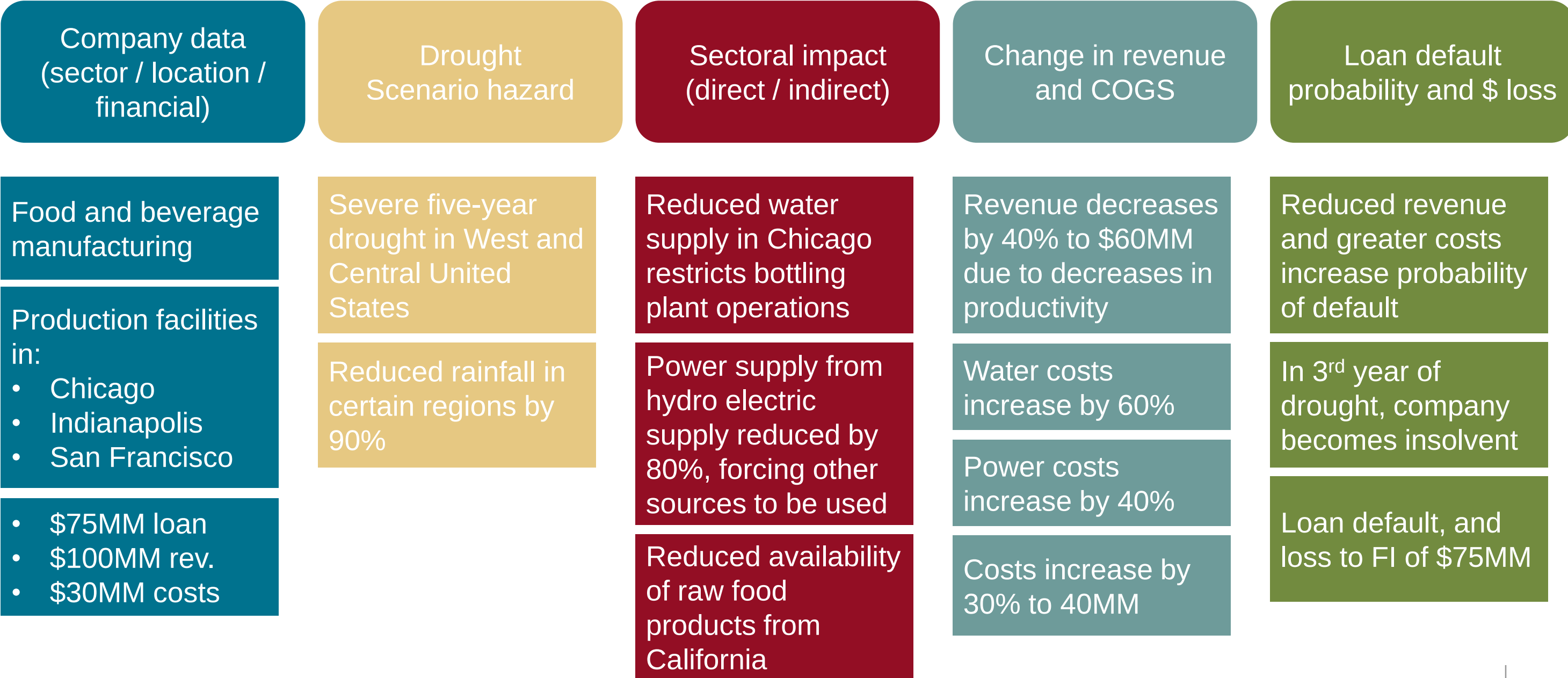
Traditional 'cat' model



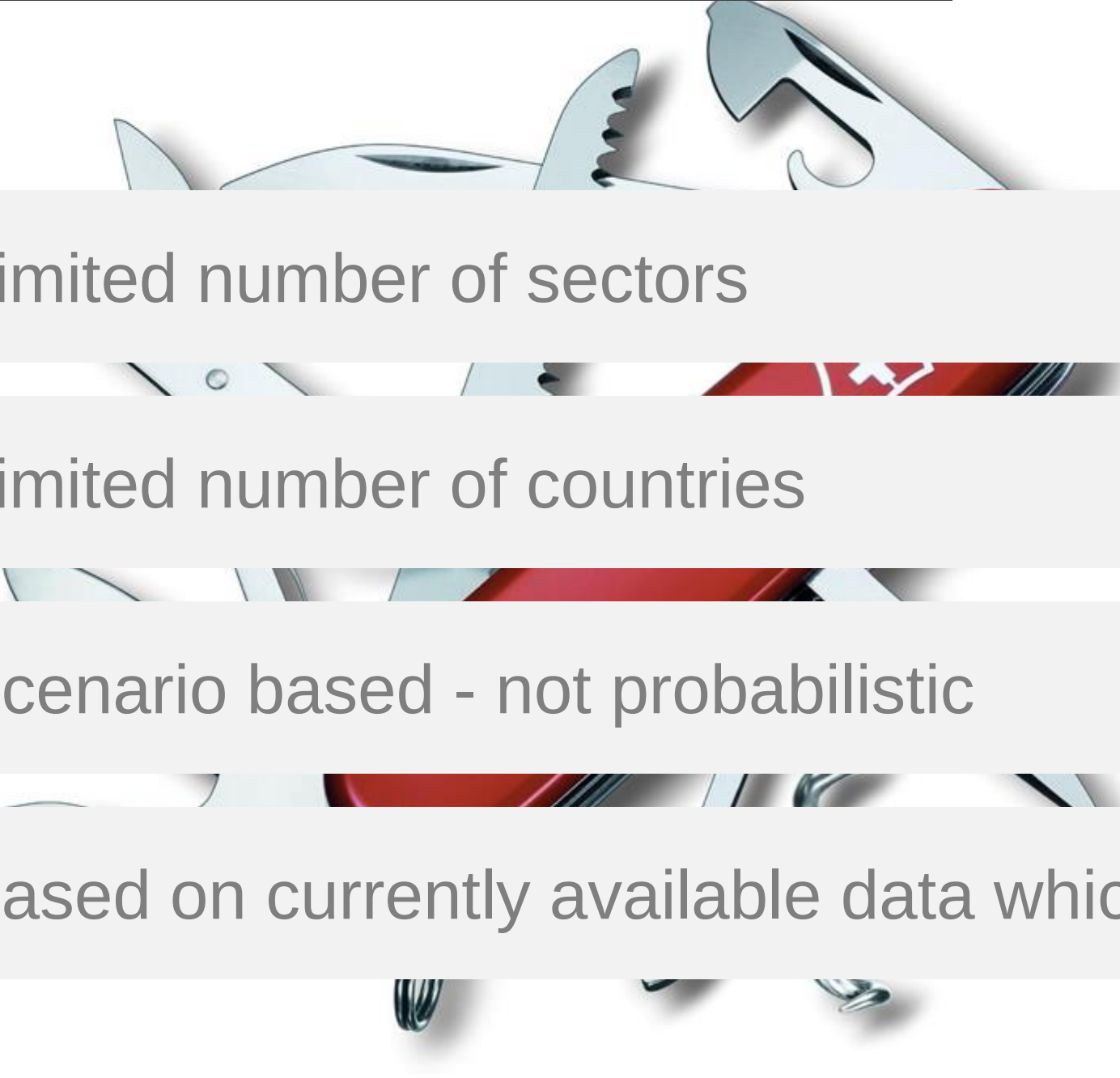
Loan default approach



High level example



What are the tool's limitations?



Limited number of sectors

Limited number of countries

Scenario based - not probabilistic

Based on currently available data which could improve

Value and benefits

Provides FI's context into potential scale of drought-driven default loss

Build intuition around sectors & regions more / less exposed to drought

Modular in nature – enabling FIs to tailor components to internal view

Provides general framework to develop environmental risk models

QUESTIONS