IACPM and RMI
Credit Portfolio Management
Educational Workshop
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https://iacpm.org

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Credit Stress Testing in Volatile Environment

Topical Risk Themes Globally

ECONOMIC UNCERTAINTY

GEOPOLITICAL TENSIONS

REAL ESTATE DOWNTURN

CLIMATE CHANGE

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Problem Statements

*1. How to design a **relevant scenario comprehensive** enough with **quick** turnaround?*

*2. What are the appropriate transmission mechanisms **from scenarios to financial impacts**?*

*3. What are the **actionable insights** from stress testing - vulnerable names vs portfolio resilience?*

*4. What to build in **people** and **systems** for **robust and efficient** stress testing capabilities?*

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1. How to design a relevant scenario comprehensive enough with quick turnaround?

Starting point is a set of storyline / narratives which are then translated into macro-economic variables (MEVs) assumptions.

Simple, fast time-to-market

- Pre-set Macro-economic variables (MEVs) combos to represent different severity of macro stress

SG	GFC (2008 Q4)	AFC (1998 Q4)	Worst 10th percentiles
Real GDP (%growth annual)	1.9%	-2.2%	-1.1%
Property Price (private) (YoY%)	-5%	-34%	-10%
Equity Price (YoY%)	-49%	-9%	-21%

Bespoke, comprehensive

- Bespoke scenario narratives and MEVs tailored to specific risk theme, e.g. US-China tensions, higher-for-longer interest rates, supply chain disruptions, high inflation globally

SG	2025	2026	2027
Real GDP (%growth annual)	1%	2%	2.5%
Property Price (private) (YoY%)	-4%	3%	3%
Equity Price (YoY%)	-17%	3%	5%

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2. What are the appropriate transmission mechanisms from scenarios to financial impacts?

	Top down	Bottom up
Methodology / Transmission Mechanism	MEV impact on common risk drivers at the region/country and/or sector/industry level	Impact of scenario on financials of individual companies, which can be fed into existing credit rating / loss models
Pros	Methodology and system already in place for regulatory stress test and ECL	Depending on the granularity / complexity of approach, can better capture company specific factors
Cons	Similar impact on companies with same starting rating, industry and country => may not be able to adequately account for company specific factors	Can be a massive exercise to run this through the companies in the book, though one potential mitigating factor is banks have already built risk models with similar structure
Use Case	Assess impact of stress scenario on adequacy of capital / provisions at overall portfolio level	Identify potentially vulnerable companies based on ratios / migration to conduct deep dive for rating override, watchlisting etc.

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2. What are the appropriate transmission mechanisms from scenarios to financial impacts?

Corporate Lending

Examples of macro-economic variables (MEVs) used in stress testing models	Examples of financial risk factors used in risk rating model	Examples of qualitative factors used in risk rating model
• Real GDP • Bond Indices • Equity Prices • Commodity Prices • Fed Funds Rate	• Profit Before Tax / Net Sales • EBITA / Interest expense • Equity / Total Assets • Cash from operations / Liabilities	• Industry Outlook • Management Quality • Account behaviour • Regulatory environment • Years of relationship

Areas to consider:

1. How granular / sector specific to build linkages between MEVs and financial ratios to balance accuracy and simplicity?
2. Where to incorporate credit / business expert inputs into building the linkages?
3. Potential blind-spots in historical time series data with noises due to political/regulatory driven market movements?

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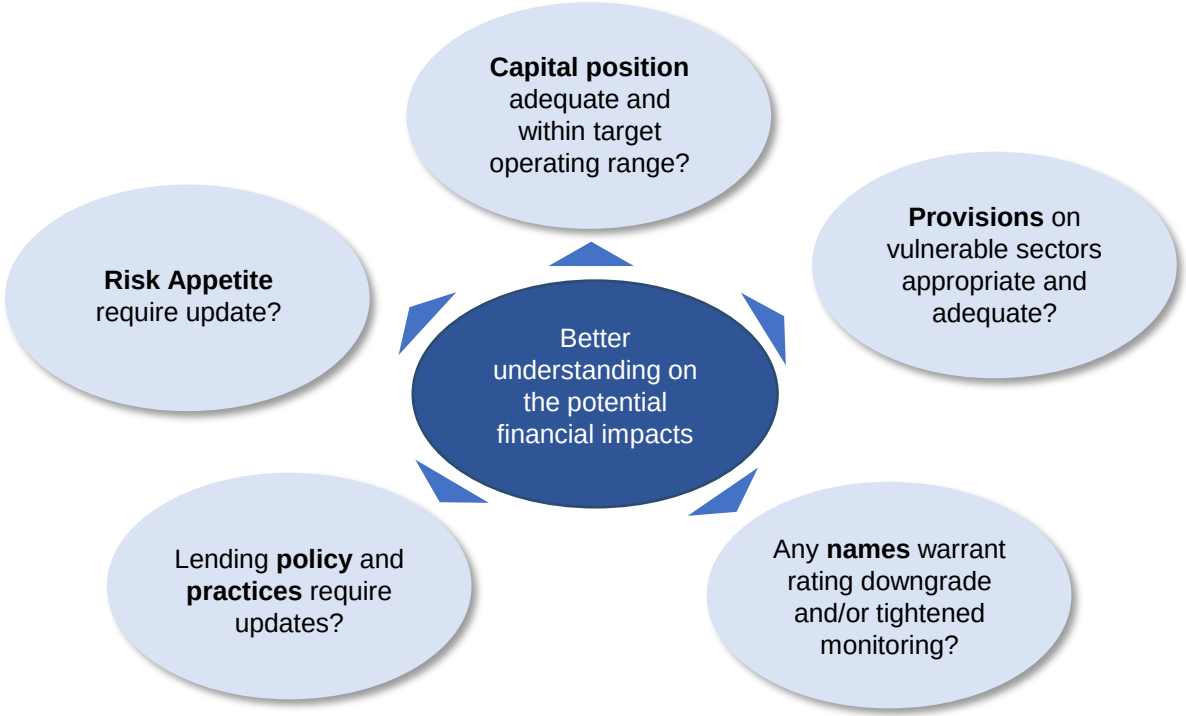
3. What are the actionable insights from stress testing – vulnerable names vs portfolio resilience?



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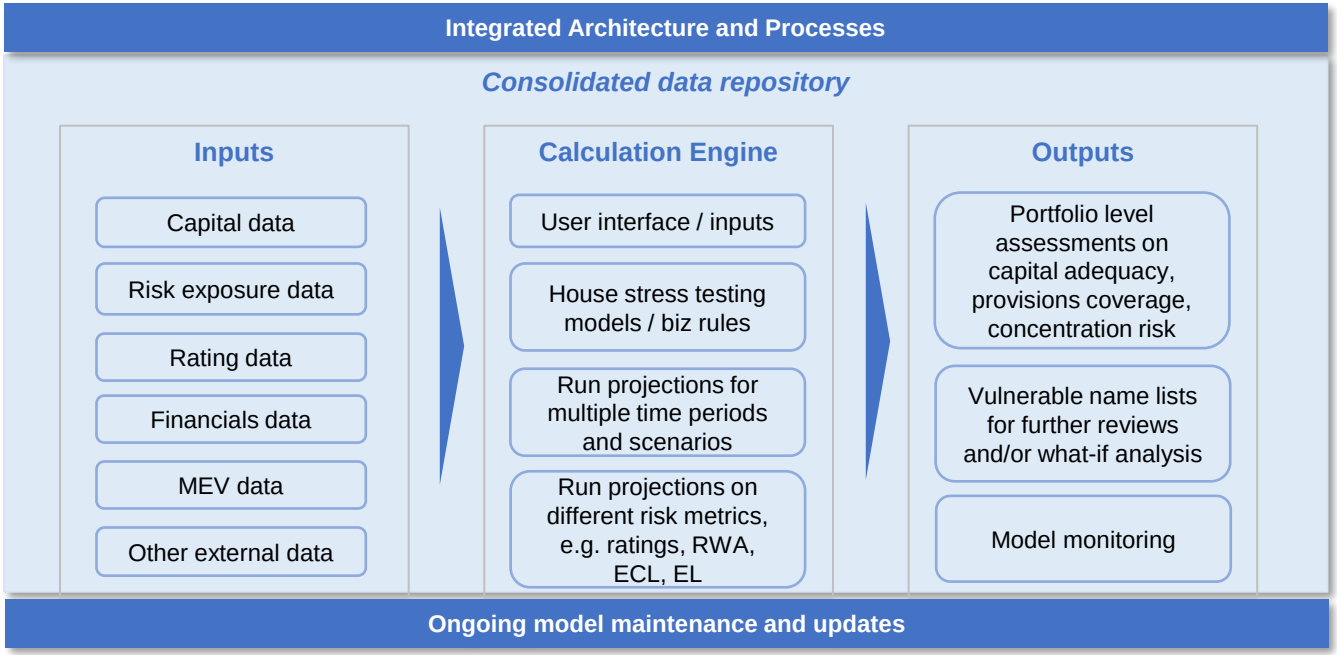
4. What to build in people and systems for robust and efficient stress testing capabilities?



People capabilities:

- Risk modelling
- Data mining
- System development
- Risk management
- Business knowledge
- Regulatory knowledge

What about GenAI/ technology?

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Thank you!

Q & A