



Stress Testing: Consumer Portfolios

Nihit Mohan

* The views expressed in this presentations are solely mine, not to be misconstrued to be my employer's

About Me

- 13 years of professional experience operating at the intersection of Risk, Retail Banking and Stress Testing within globally recognised Banks in Singapore. Performing confidently within highly regulated environments to recognised standards, and directing collaborations with various Stakeholders. Identifies areas for improvement, strategically develops solutions and problem solves through intensive research and in-depth analysis. Skilled at driving operational quality and solidifying risk frameworks to strengthen regulatory reputation
- Personally, I love travelling distant places, like to collect artwork from my travels. I collaborate with artists across Asia and Europe for their artworks.
- Recently, I have picked up blogging and podcasting on various management philosophies and day-to-day anecdotes.
- You can reach me at the following:
 - Phone: +65-9855-1547
 - LinkedIn: <https://www.linkedin.com/in/nihit-mohan-18091986>
 - Website: www.nihitmohan.com



What are we going to discuss ?

Why ?

Why do we perform Stress Test ?
Why regulators focus on stress test results ?

What ?

What is Stress Testing ?
What are the principles of stress testing ?

How ?

How do we go about interpreting stress testing results ?
How do we define and scope out a Stress test ?

Where ?

Where do we find people to do Stress test ?
Where all can I use stress test results ?

Stress Testing: Introduction

- Mandated enterprise stress testing – the primary macro-prudential tool that emerged from the 2008 financial crisis – helps regulators address concerns about the state of the banking industry and its impact on the local and global financial system. These regulatory stress tests typically focus on the largest banking institutions and involve a limited set of prescribed downturn scenarios.
- Regulatory stress tests mandated by supervisors mainly focus on the capital planning of the financial institutions. However, stress tests also cover the impact of a macro-economic scenario on every aspect of the portfolios be it Credit Risk, Market Risk or even Collateral Risk.
- In today's context, stress testing has leaped forward from being regulatory compliance tool to management tool.
- The question is, what's the best way to go about stress testing, and what other benefits can banks realize from this investment? Equally important, should you view stress testing primarily as a regulatory compliance tool? Or can banks harness it as a management tool that links corporate planning and risk appetite – and democratizes scenario-based analysis across the institution for faster, better business decisions?

What is Stress Testing ?

Stress Testing

- Stress testing can be
 - **Scenario analysis**: Specify an alternative state of the world and see what happens.
 - **Sensitivity Analysis**: Change in just one variable and see what happens to the portfolio
- Stress tests can be run on any part of the business on any risk type, at any level of consolidation

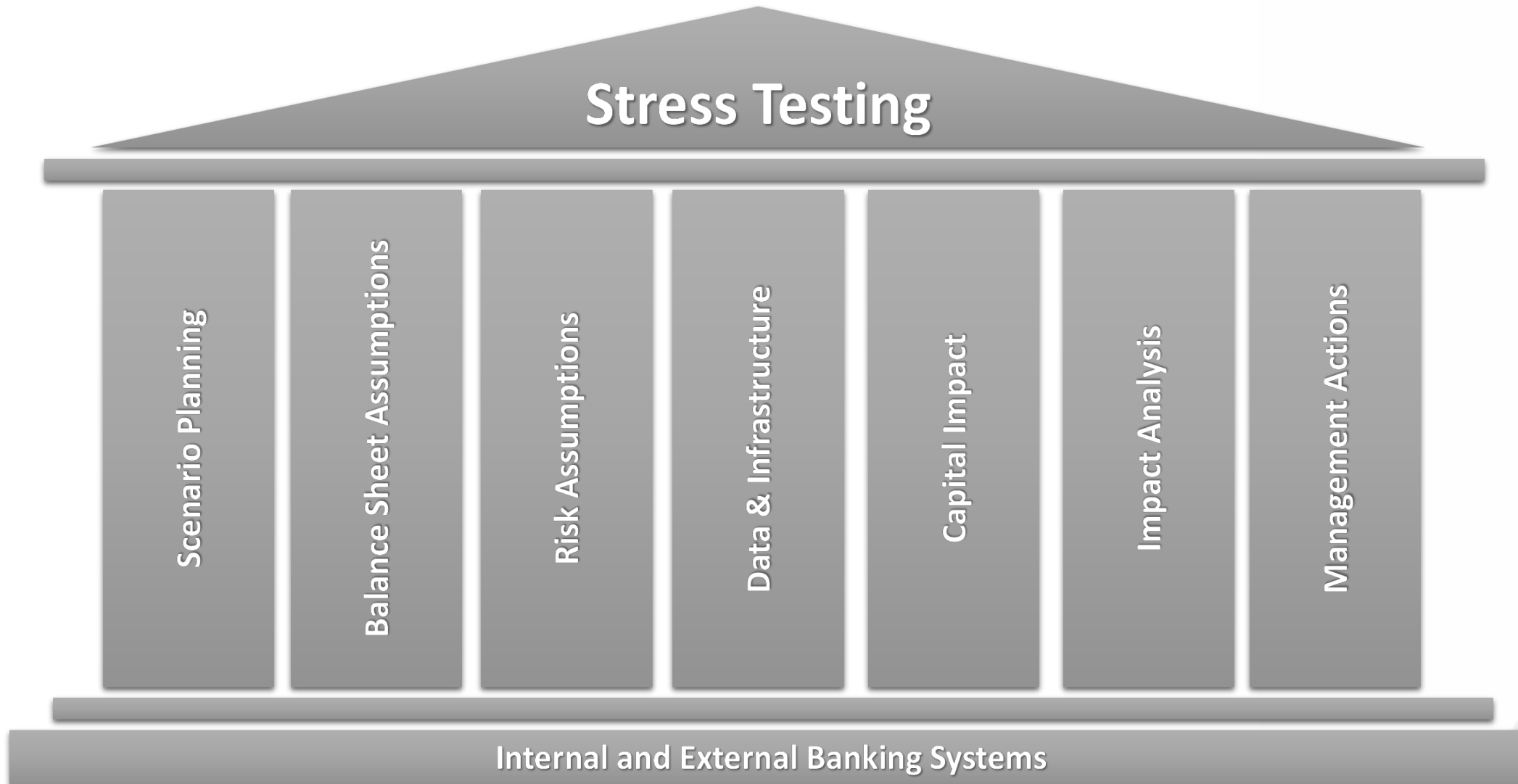
Enterprise View of Stress Testing

- If a stress test considers the effect of a scenario on all business, all risk types and at a legal entity level it gives enterprise view - every aspect of business is stressed appropriately.
- The enterprise view gives a key lens on legal entity for management and the Board, informs the calibration of Risk Appetite and helps in meeting regulatory requirements.

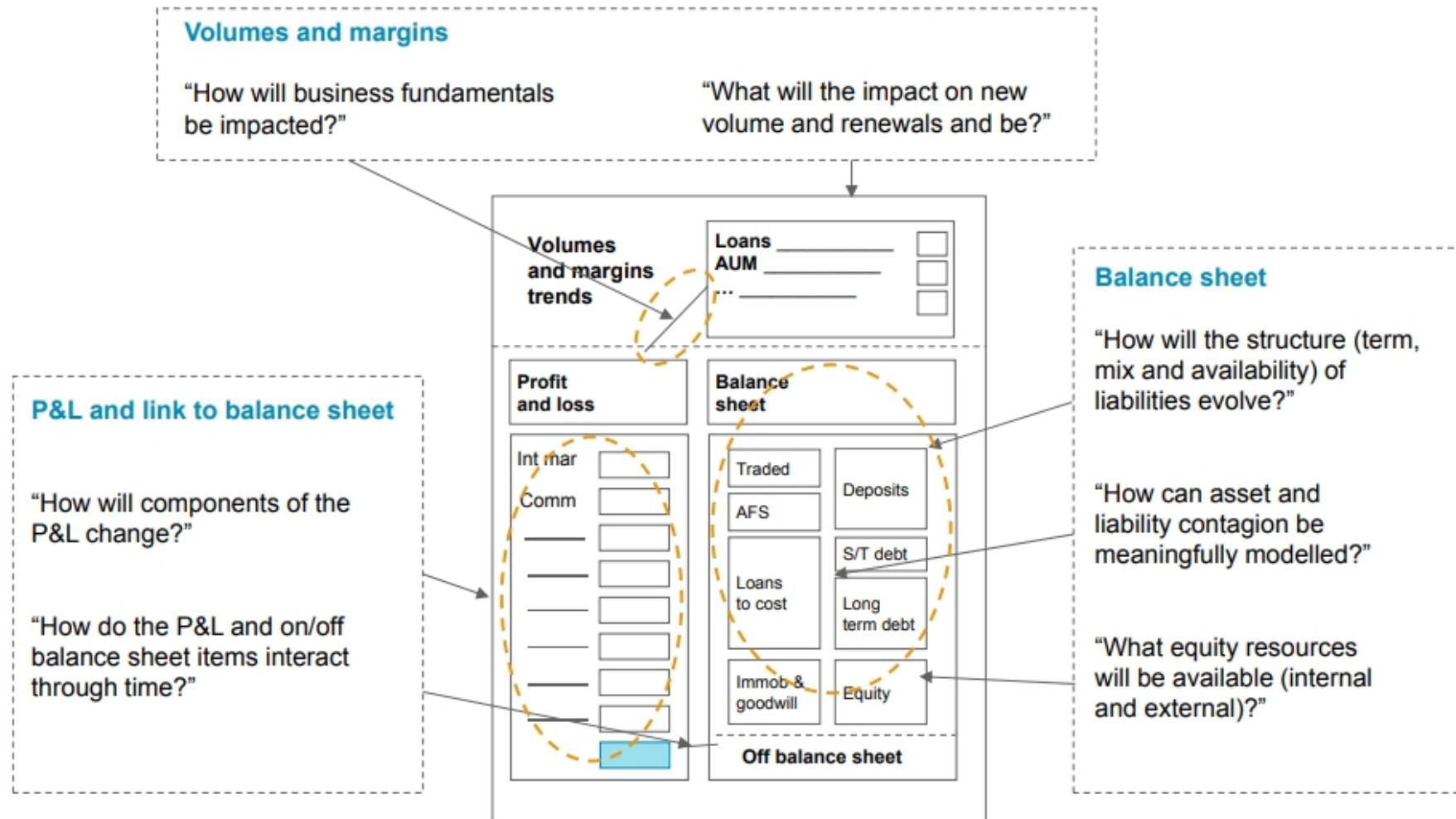
Why do we do Stress Test ?

Reasons for Stress Test		Types of Stress Test
1	<p>Ensure that the Bank does not have excessive concentrations of risk that could produce unacceptably high losses</p> <ul style="list-style-type: none"> To help management reshape portfolio composition and/or set limits 	<ul style="list-style-type: none"> Portfolio, e.g Real Estate, Personal Loans etc. Risk Type, e.g. Credit, CCR, Market etc.
2	<p>Ensure that bank understands its balance sheet vulnerabilities; and has sufficient financial resources to withstand severe but plausible stress events.</p> <ul style="list-style-type: none"> To help management and Board assess if buffers of capital and liquidity are required on top of regulatory requirements – Risk Appetite To identify BAU actions that can make the institution more resilient to stress. 	<ul style="list-style-type: none"> Capital (macro financial downturn) – ICAAP, MAS IWST, HKMA SDST, BoE ACS stress tests. Liquidity (firm specific or market wide) – ILAAP Stress test, Survival Horizons
3	<p>Ensure that institution has financial flexibility to respond to extreme but plausible shocks</p> <ul style="list-style-type: none"> To help management and board assess if bank has an appropriate set of management actions to rebuild capital and liquidity. 	<ul style="list-style-type: none"> Recovery plan stress test (four scenarios, combinations of macro-economic stress, firm-specific and market wide-liquidity crunch)
4	<p>Ensure that the management and the Board understand the potential fatal threats to the bank, even if remote.</p> <ul style="list-style-type: none"> To help management assess if risks around key business model vulnerabilities have been sufficiently mitigated. 	<ul style="list-style-type: none"> Reverse stress test (no constraints on scenario, one example is cyber attack)

What are “Principles” of Stress Testing

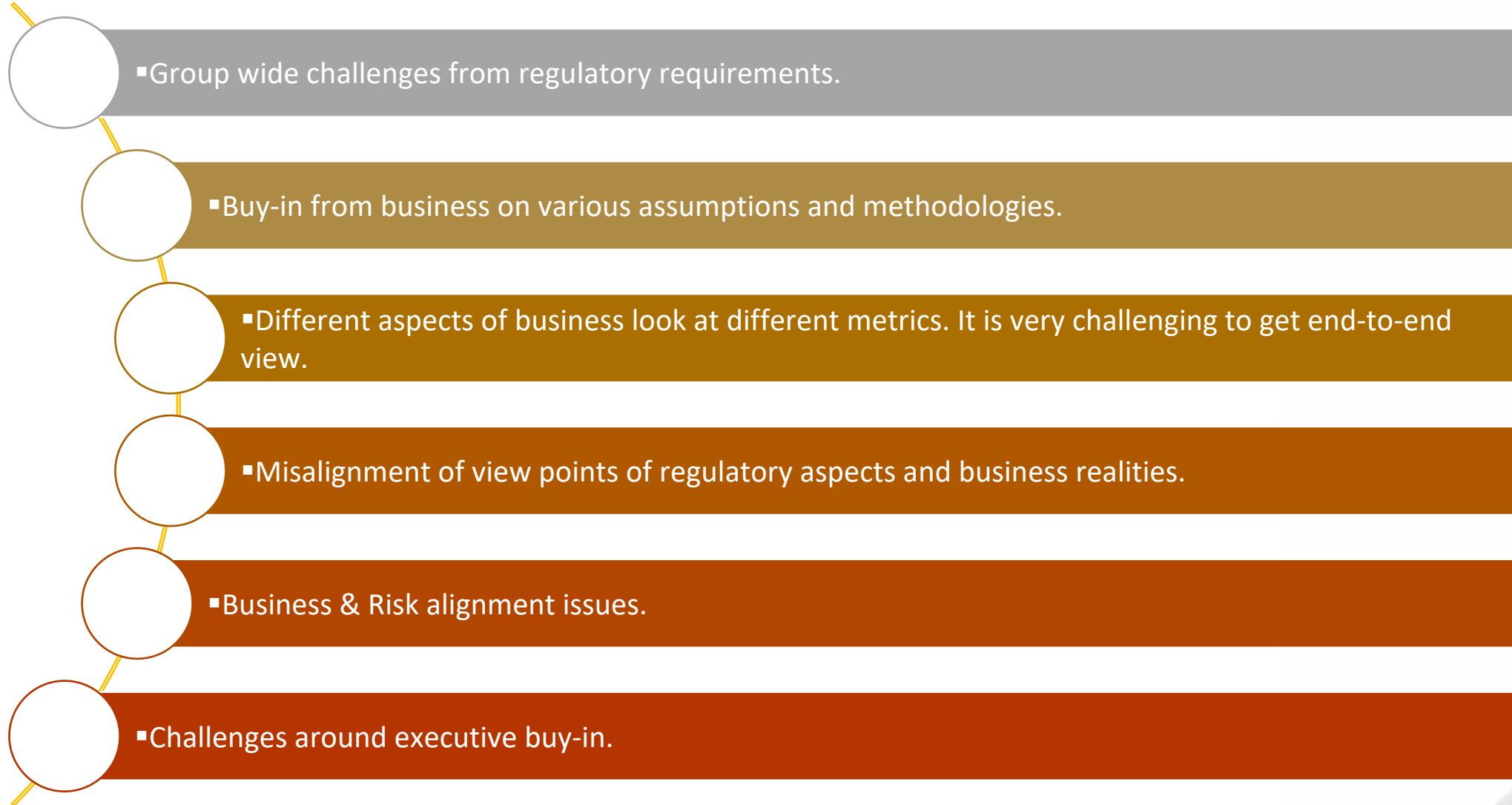


What are “Principles” of Stress Testing



Sourced from: Oliver Wyman Stress testing paper

Challenges



How do we institute a Stress Test ?

- Subject Matter Experts
- Market Consultants
- Treasury Experts
- Risk Experts
- Finance Experts

People

Systems

- Systems play an important role.
- Investment in technology is pivotal for a program
- Selection of technology is very important for implementation

- Clear Vision statement
- Formulating a 6-month/12-Month/18-Month View
- Directives from Regulatory bodies

Strategy

Process

- Setting up a operational process and methodologies involving various workstreams and stakeholders
- Data Quality and Reconciliation process
- Calculation Intensive process

Uses & Applications

Accurate Capital allocation to various businesses and products for maximising RoE

Setting up guard rails of growth, concentration and optimisation of the portfolios

Portfolio management actions as a trigger based “What-if” tool

Collateralization levels and quality of collateral

Analysing vulnerabilities of business models, risk models and product offerings

Crafting Business strategy and Product profitability

Credit decisioning for Retail and Wholesale customers

Strategy for deploying management actions to recovery plan for bank.

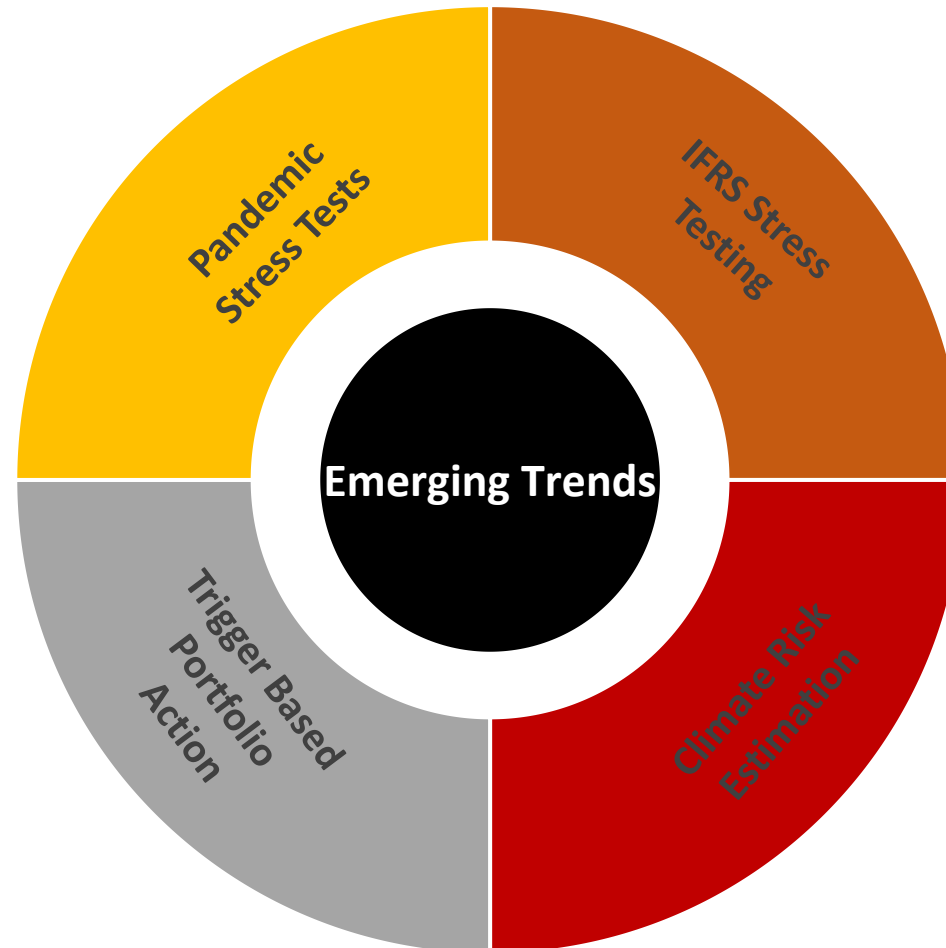
Develop corporate plan based on envisaged macro-economics and existing risk profile.

Emerging trends in Stress Testing

With ongoing global pandemic situation, many stress tests have been instituted to get a view on the repercussions of series of lockdowns and circuit breakers.

Pandemics are very rare events, and none of the economists and strategists prepare themselves for such scenarios.

Trigger based portfolio actions is one of the applications of stress testing. Trigger based action plan is one of the key in business strategy decisions.



IFRS Stress testing is an upcoming suite of methodologies where forward looking models are used for regulatory and impairment projections.

Apart from regulators from UK, US and Singapore, many regulators and financial institutions are grappling with the new form of stress testing principles.

Stress testing is one of the key tools in estimating the climate risk impact on financial portfolios for a longer trajectory.

This will also help in crafting out strategy for long term loans in climate risk related geographies or climate risk related businesses.

Stress Testing: Further Reading

