



The Future of Life Insurance Stress Testing

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The world is uncertain...

What are the Panama Papers? A guide to the biggest data leak in history

The Guardian, 4/4/16

Finnish defense ministry website targeted by cyber attack

Reuters, 22/3/16

Wake up — Britain is heading for Brexit

FT, 21/3/16

Global spread of Zika linked to types of mosquitoes that transmit it

ScienceDaily, 22/3/16

Brussels attacks: Zaventem and Maelbeek bombs kill many

BBC News, 22/3/16

And is getting more uncertain...



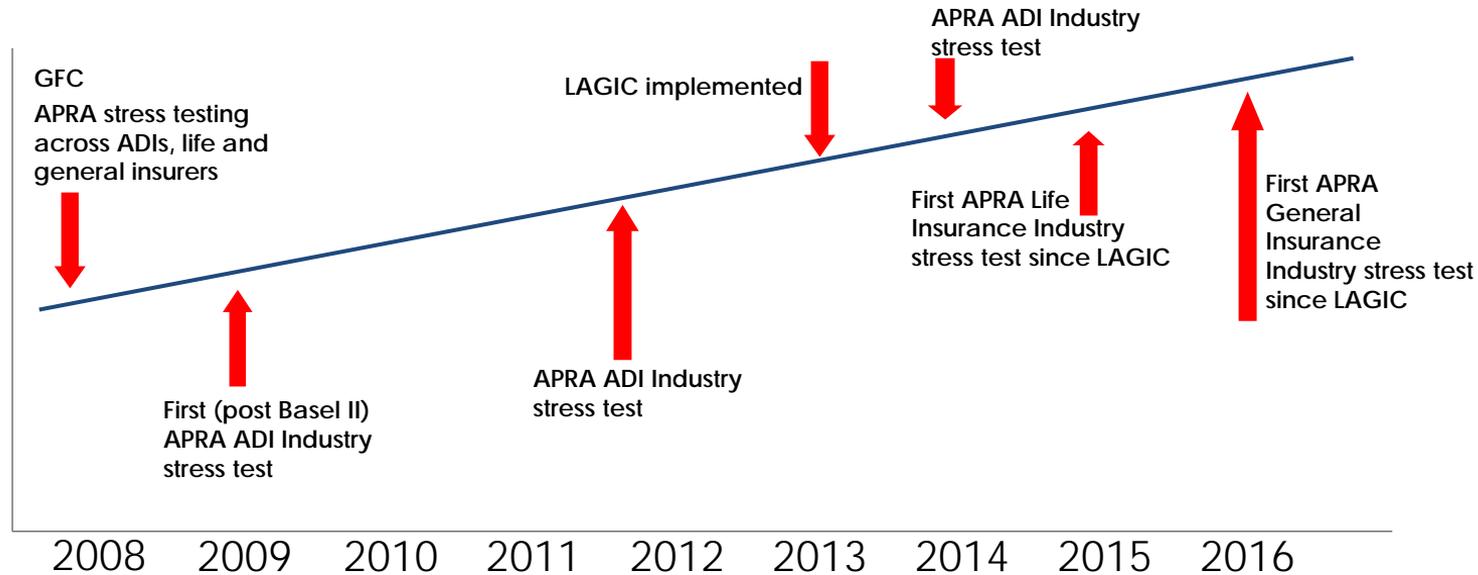
Agenda

1. Current state of stress testing
2. Approach to developing stress testing narrative exercises
3. Case study narrative exercise example
4. Key challenges and conclusions
5. Q&A session

CURRENT STATE OF STRESS TESTING



A recent history of stress testing developments for Australian Insurers and ADIs



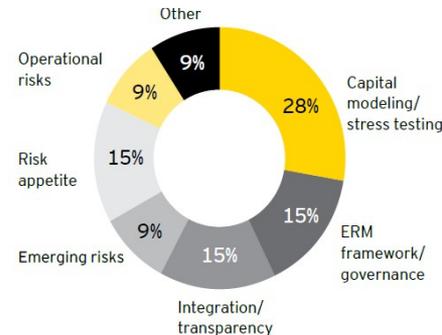
What is the insurance industry doing globally?

- There is a collaborative approach to stress testing with cross functional input and buy-in.
- There are planned additional investments in modelling capabilities.

European insurance CROs: What methods are adopted for stress testing?

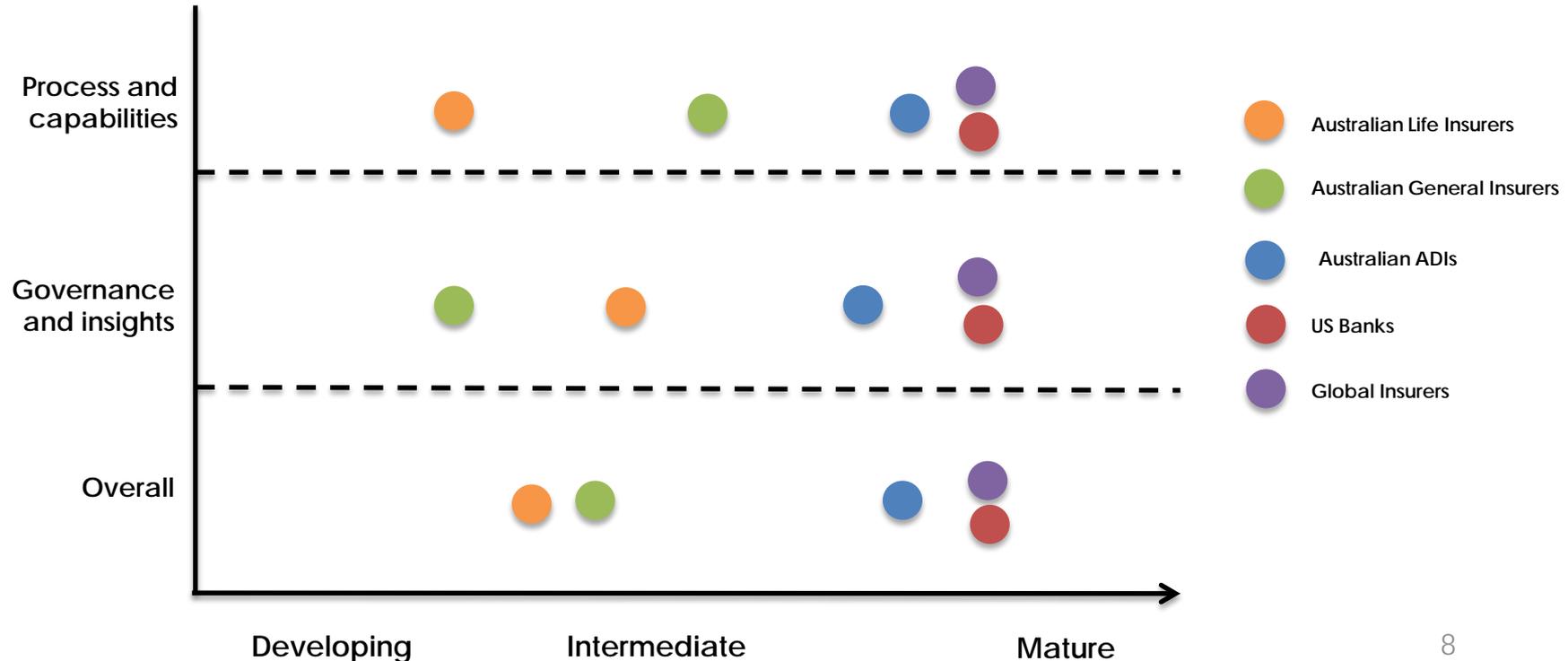


US insurance CROs: In which areas will more attention be devoted in the next 12 months?





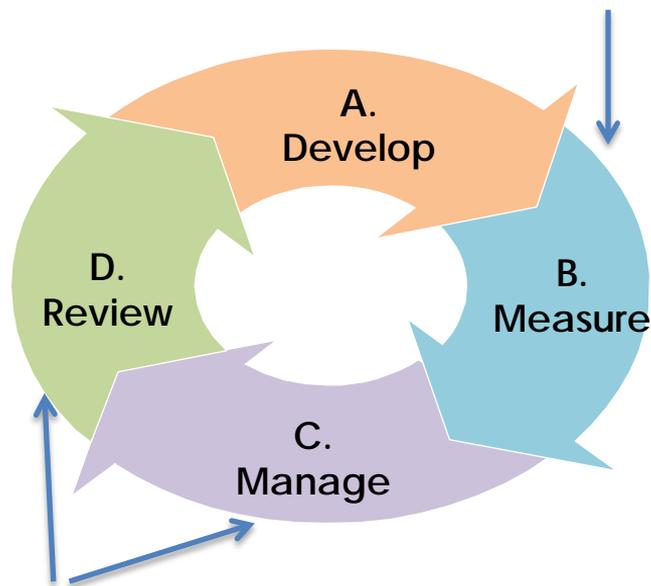
Where do we think we are now? There are a range of views...



AN APPROACH TO DEVELOPING STRESS TESTING NARRATIVE EXERCISES

Narrative exercise development approach

Process focused



Insights focused

Key stakeholders to involve include:

- Board
- Senior management
- Actuarial function
- Risk management
- Products and distribution
- Claims and underwriting
- IT
- Investment managers
- Finance

Resource requirements include:

- Key stakeholder input
- Board engagement e.g. workshops
- Actuarial capabilities (capital and profit expertise)
- Modelling capabilities
- Risk heat maps (likelihood versus severity)



Key considerations

At the Statutory Fund level consider the following:





Key considerations continued

- Timeframe of risk emergence and recovery
- Severity of the risks
- Scenario narratives will differ depending on the timeframe and severity:
 1. “Sharp shock” ... e.g. investment and catastrophe risks
 2. “Slow burn” ... e.g. strategic risks
 3. A combination of risks

CASE STUDY NARRATIVE EXERCISE EXAMPLE

You are "SafeInsurer"

- A Large mature life insurer selling retail lump sum and income protection business.
- Experience has been stable.

A description of SafeInsurer's business processes is below:

Business process	Description
Distribution	<ul style="list-style-type: none"> • Products sold through advisors only.
Underwriting	<ul style="list-style-type: none"> • Full underwriting of products. • Average underwriting times of 1 week for large non-standard cases.
Claims management	<ul style="list-style-type: none"> • Little transparency to policyholder of claims progression. • Average settlement time of 1 year for complex claims.
Reinsurance	<ul style="list-style-type: none"> • Products reinsured through local reinsurance market.
Product features	<ul style="list-style-type: none"> • Typical product exclusions e.g. high risk recreational activities.

The narrative – A digital disruptor #insurance

- **#insurance** enters the life insurance market selling retail lump sum and income protection products.
- The target market is young and healthy lives.
- **#insurance** has a well capitalised overseas parent with a considerable risk appetite.

A description of **#insurance's** business processes is below:

Business process	Description
Distribution	<ul style="list-style-type: none"> • Products sold only through digital robo-advice (leading to lower distribution costs).
Underwriting	<ul style="list-style-type: none"> • Semi-automated underwriting process. • Average underwriting times are same day for large and non-standard cases.
Claims management	<ul style="list-style-type: none"> • Claims are lodged through the #insurance app. • There is full transparency to policyholders of claims progression. • Average settlement time of 2 weeks for complex claims.
Reinsurance	<ul style="list-style-type: none"> • No reinsurance arrangements are in place.
Product features	<ul style="list-style-type: none"> • Special cover is provided for high risk recreational activities.

The narrative continued

- **#insurance's** new business volumes have increased rapidly due to an aggressive social media strategy.
- Their most popular product is a simple term life policy, \$100,000 sum assured with no underwriting.
- They are now the dominant life insurer amongst 25 – 40 year olds.

A. Develop...

- This step is process driven, with a focus on identifying the key drivers under the narrative, for example:
 - Lower new business volumes and higher lapses as SafeInsurer has been undercut on price.
 - Poorer claims experience due to anti-selection – younger, healthy lives lapse to go to **#insurance**.
 - Reputational damage due to the negative social media campaign and the length of time to settle claims causing policyholders to become disgruntled.
- A workshop style approach can be used to better understand key drivers at a more detailed level.

B. Measure...

- Given key drivers identified, quantify their impact on SafeInsurer.
- Consider all financials effected:
 - Profit and loss
 - Capital
 - Dividends
 - Bonus rates
- Consider data approaches available:
 - Past internal data relating to historical events only
 - Industry data
 - Combined approach

B. Measure continued...

- Sophisticated measurement requires sophisticated processes (e.g. experience investigations and assumption setting) combined with a sound understanding of the business.
- Not all risks can be quantified e.g. reputational risk.

Risk	Impacts	Stress
New business	Premiums	[x]%
Lapse	Profit, DAC recoverability	[x]%
Mortality	Claims	[x]%
Reputational risk	What will this impact?	Qualitative e.g. High, Medium, Low?
Technology risk	Expenses	[x]%

C. Manage...

- What management actions could be taken in response to this scenario?
 - What actions are available to compete?
 - What actions are available to manage capital?
 - How feasible are the ICAAP management actions under this scenario?
 - How quickly could SafelInsurer move to stay competitive?
 - What will be the flow on effects of management actions taken?
- Overall is the Board comfortable with the scenario including the impacts of the management actions?

D. Review...

- What is the Board's view on Safelinsurer's business strategy and risk appetite under the scenario? Is revision/alteration required to these?
- Should current product designs or business processes be refined in response?
- What are the impacts on pricing and new business decisions?
- What were the key learnings from assessing this emerging risk and how can they be applied?
- What developments should be made to the crisis management plan in response?
- Are updates required to the ICAAP?
- Should the target surplus be revised?

KEY CHALLENGES AND CONCLUSIONS

Current challenges and potential solutions

Process related challenges

1. Resourcing constraints:
 - *Demonstrate benefit of scenario narrative to the business more broadly.*
2. Assumption setting and rationale:
 - *Improve experience investigation processes.*
3. Multi -year multi -factor modelling:
 - *Further investment may be required.*
4. Some product features and risks are difficult to model and quantify:
 - *Require suitable qualitative consideration.*
5. Modelling a diverse business has more challenges:
 - *Use groupings and approximations where necessary.*

Insights related challenges

1. Making the scenario relevant to the business:
 - *Scenario should be plausible and not too extreme.*
2. Stakeholder buy-in, accountability and decision making under a hypothetical scenario:
 - *Produce a range of outcomes with a probability attached.*
3. Information provided is too detailed:
 - *Focus on key insights and keep these succinct and relevant.*
4. Refining management actions:
 - *Be pragmatic*

Conclusions

- Scenario narratives need to be topical and align with the key concerns of the Board and senior management.
- The scenario narrative exercise should be performed on a regular basis.
- The more a business performs scenario narrative exercises, the more sophisticated it becomes.
- The focus should move beyond being purely process and capabilities driven to providing improved insights.
 - Scenario narratives must be meaningful and relevant to get business buy-in.
 - The business needs to see value added outcomes to justify investment.
- Scenario narrative results can be used to inform a range of business activities including strategic plans, management actions and capital recovery plans.

Q&A SESSION