KPMG

Enterprise Risk Management (ERM) and Own Risk and Solvency Assessment (ORSA) practices of Insurers in Singapore

10th anniversary of TIGF
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Agenda

1. **Singapore ERM and ORSA requirements for Insurers**

2. **Good Practices we observed in Singapore:**

   a. Enterprise Risk Management (ERM)

   b. Own Risk and Solvency Assessment (ORSA)

   c. Economic Capital

3. **Conclusion**

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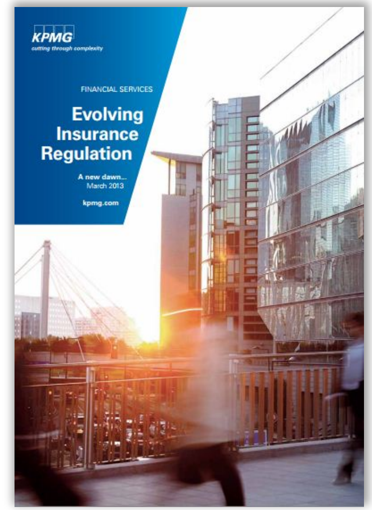
Singapore ERM and ORSA requirements for Insurers

What has been the driver behind the changes?



Historically the focus was very nationalistic…

- ❑ Singapore – RBC
- ❑ Canada – DCAT
- ❑ NAIC – RBC
- ❑ Australia – Non-Life RBC reforms
- ❑ UK – ICAS reforms
- ❑ Europe – Solvency 1

Changes have been pushed at a global level…

- ❑ ICP 16 requires supervisors to seek high standards of risk management and governance, and supervisors are being encouraged to challenge insurers on risk management standards
- ❑ ICP 16 introduces the concept of the ORSA requirement

Enterprise risk management (ERM)

- Need to establish ERM requirements to address all relevant and material risks
- A thorough understanding of risk types, their characteristics and interdependencies, the sources of the risks and their potential impact on the business is essential

Own risk and solvency assessment (ORSA)

- Need for insurers to perform an own risk and solvency assessment (ORSA) regularly to assess the adequacy of its risk management and current, and likely future, solvency position
- ORSA to encompass all reasonably foreseeable and relevant material risks including, as a minimum, underwriting, credit, market, operational and liquidity risks and additional risks arising due to membership of a group

MAS 126 Enterprise Risk Management for Insurers

MAS 126 Enterprise Risk Management notice for Insurers was issued in 2013…

❑ **Set out an ERM framework** which meets specific requirements of the notice

- Risk Identification and Measurement
- Risk Management Policy
- Risk Tolerance Statement
- Risk Responsiveness and Feedback Loop

❑ **Perform an ORSA at least annually**, to "assess the adequacy of its risk management, and current and projected future solvency position with a time horizon which is consistent with that used in its business planning".

- Economic and regulatory capital
- Continuity Analysis and Stress Testing

Why is ORSA an important topic for Directors?

- The Board has a significant role to play **in overseeing management's assessments of risk and solvency** and challenging ORSA results as they are communicated by management**.**

- An ORSA provides an **understanding of the company's risk profile going forward** i.e. how the evolving risk profile relates to the risk appetite under the various alternatives, **and the capital resources available to support current and emerging risks.**

- ORSA increases **credibility with regulators or supervisors** including rating agencies, due to the potential impact of a risk management process on company ratings.

- As an ongoing process that a company needs to carry out on a regular basis, ORSA helps **build/maintain risk awareness throughout the company.**

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Good Practices we observed in Singapore: ERM

How have we seen ERM developing in Singapore?

The evolution of ERM for insurers

Old World Risk Management	New World ERM
Tactically focused	Strategic and performance focus
Controls led	Value driven
Focused on bottom up details	Top down thought leadership
Generalist	Specialist
Fragmented framework – risks considered in silos	Comprehensive consistent group wide framework
Historical bias	Forward looking bias
Analysis heavy	Action focused
Blurred accountabilities between 1st/2nd/3rd LOD	Clear 3 LOD accountability

The growing value of good risk management

The drivers for risk management improvements

- ❑ Greater volatility and interconnectedness
- ❑ Increased pressure on Boards to deliver results
- ❑ Increased external scrutiny on companies
- ❑ Understand new products and new assets

Benefits of good risk management

- ❑ Better understanding and awareness of the risks in the business and long-term business vulnerabilities
- ❑ Supporting the delivery of the strategy
- ❑ Minimising losses from unexpected risks
- ❑ Identifying and managing volatility
- ❑ Protecting the business from internal and external loss events
- ❑ Supporting credit rating
- ❑ Appeasing regulators

ERM is a framework AND a function

Enterprise Risk Management

Need a *risk management framework* that runs throughout the insurers

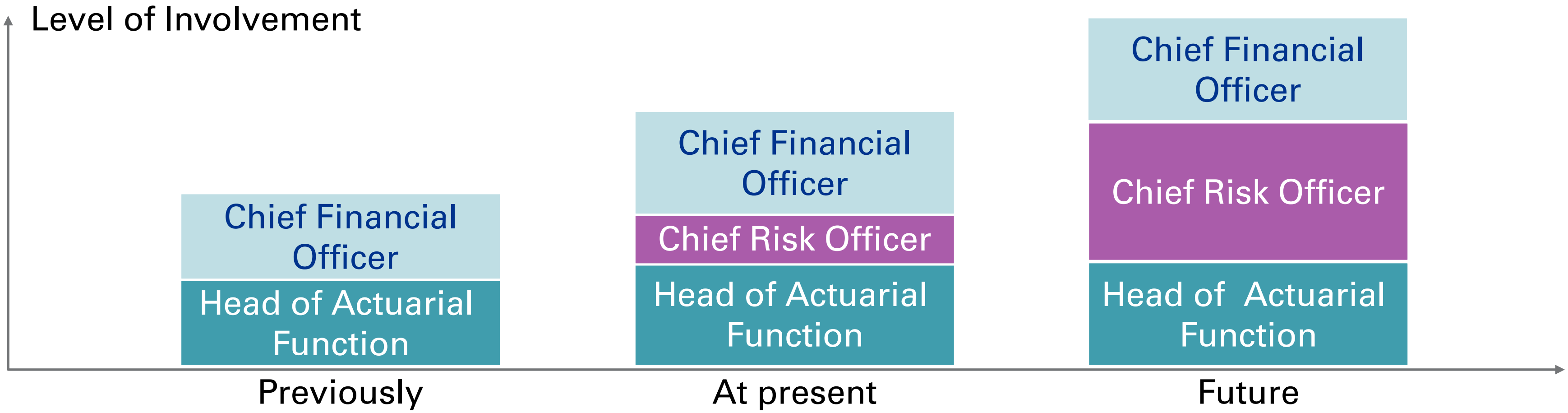
- An effective risk-management framework comprises strategies, processes and reporting procedures necessary to identify, assess, measure, monitor, control and mitigate, on a continuous basis the risks, at an individual and at an aggregated level, to which an insurer is or could be exposed, and their interdependencies
- All risks need to be included within the risk management framework – those the insurer is exposed to now and also may be exposed to in the future
- The risk management framework should be adequately documented

Need a *risk management function* within the business

A risk management function is needed to facilitate the implementation of the risk management framework including:

- **Aggregation** – collecting and monitoring information from the business
- **Reporting** – reporting to senior management on risk activity across the organisation
- **Challenging** – challenging risk management in the business including key decisions and maintaining the risk management framework
- **Advising** – providing advice on best practice risk management and work with the business to on all significant business decisions

Who leads the ERM Function?



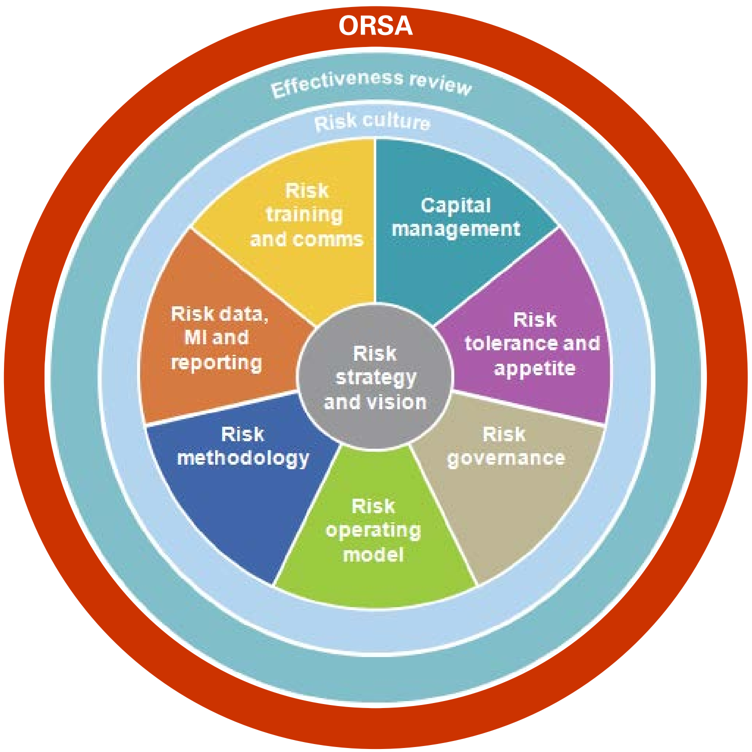
It is envisaged that there is a much greater role for the CRO in the future…

The CRO's role:

- ❑ Be accountable for oversight of firm-wide risk management and the risk management framework
- ❑ Assist the Board, other senior committees and other management in the effective operation of the risk management framework
- ❑ Be fully independent of a firm's business and support their risk management
- ❑ Have unfettered access to business areas which impact the overall risk profile
- ❑ Ensure data used to assess risks are fit for purpose.
- ❑ Provide oversight and validation of external reporting of risk
- ❑ Ensure adequacy of risk information, risk analysis and training to the Board and Senior Management
- ❑ Challenge business strategy or plans that exceed risk appetite and tolerance including identifying and assessing emerging risks to support the delivery of the strategy

What are the components of an ERM Framework?

The diagram below illustrates each of the key components of a ERM framework



Element	Definition
Risk Strategy and Vision	Long-term plan of how risk management effectively supports the achievement of the organisation's goals
Capital Management	Processes, procedures and systems for understanding the impact of risk on the organisation's capital and utilising this information in its decision-making
Risk Tolerance and Appetite	Articulation of the organisation's tolerance for risk-taking to achieve its commercial objectives
Risk Governance	Structure within which responsibility and accountability for risk management and oversight is defined and communicated throughout an organisation including policies and committees
Risk Operating Model	Structure within which risk management is delivered across the organisation, typically defined as 3 Lines of Defence
Risk Methodology	Processes, procedures and systems for identifying, measuring, monitoring, managing and reporting risk now and in the future
Risk Data, MI and Reporting	Information and associated storage and delivery mechanisms which provide management with a view of the organisation's risks and how these are being managed (including risk register)
Risk Training and Comms	Processes by which the risk capability, understanding and awareness of the organisation's people is developed and maintained
Risk Culture	Embedded risk behaviours of the organisation
Effectiveness Review	Internal processes by which the Board derives assurance that the framework is effective
ORSA or Equivalent	Forward-looking process linking together risk management activities, solvency consideration and capital management.

Benefits from setting Risk Appetite & Tolerance

Regulatory Drivers

"The Board is responsible for the governance of risk. The Board should ensure that Management maintains a sound system of risk management and internal controls to safeguard shareholders' interests and the company's assets, and should ***determine the nature and extent of the significant risks which the Board is willing to take in achieving its strategic objectives.****"*

Both a key building block of risk governance and a strong business enabler

Source: Principle 11, Singapore Code of Corporate Governance (2012)

Business Drivers

1. **Understand Risks carried by strategy:** Enable internal and external stakeholders to better evaluate risks of and to the strategic objectives/ strategies

2. **Support decision-making:** Answer key questions such as: "*Are we taking on too much risk in the pursuit of growth and performance?*" or *"Are we under controlling or over controlling?"*

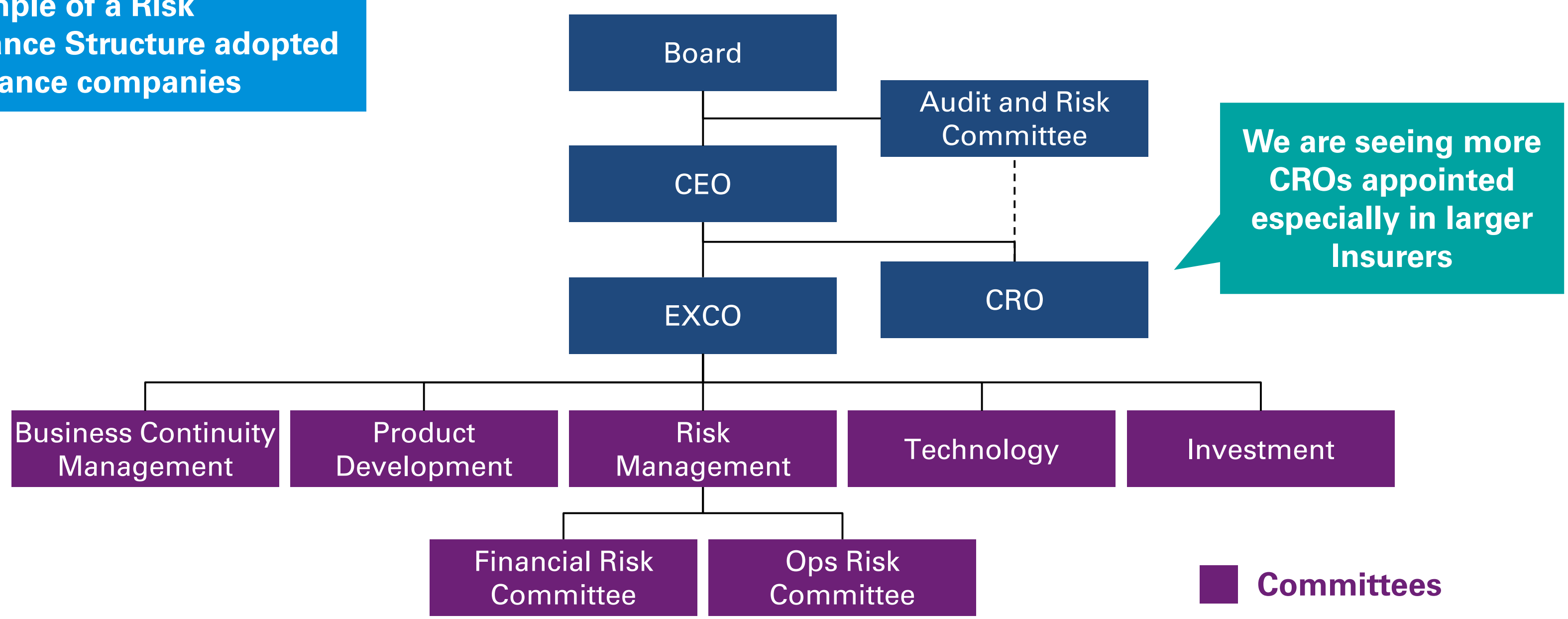
3. **Risk and resource optimisation:** Help provide greater clarity on what risk can be taken/ risk management strategies and allocation of risk resources

4. **Monitoring, reporting and accountability :** Optimise risk monitoring and reporting process in setting triggers and escalation thresholds to report risks to the right authority level

How is Risk Governance applied in peer insurers?

Sample 'Lines of Defence Model' adopted by a large Singapore Insurer

An example of a Risk Governance Structure adopted by insurance companies



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Good Practices we observed in Singapore: ORSA

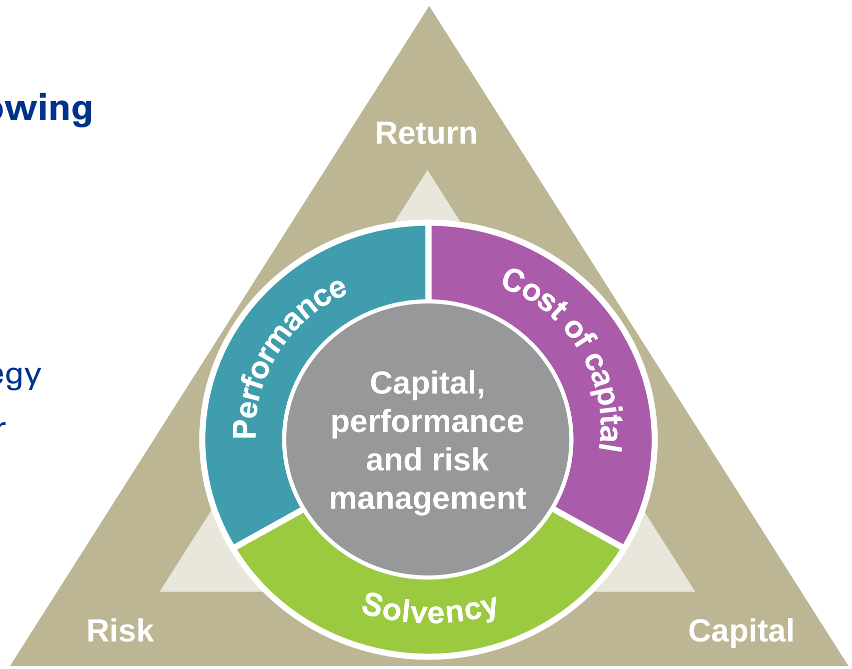
Overview of the ORSA

The Own Risk and Solvency Assessment (ORSA)

- The ORSA is a self-driven process by the insurer to assess the adequacy of its risk management and its current, and likely future, solvency position given the existing and potential risks identified
- As part of the ERM framework, each insurer should undertake its ORSA regularly, giving due consideration to the dynamic interactions between risks, and the links between risk management, business strategy and capital management
- The Board and Senior Management of the insurer are responsible for the ORSA process

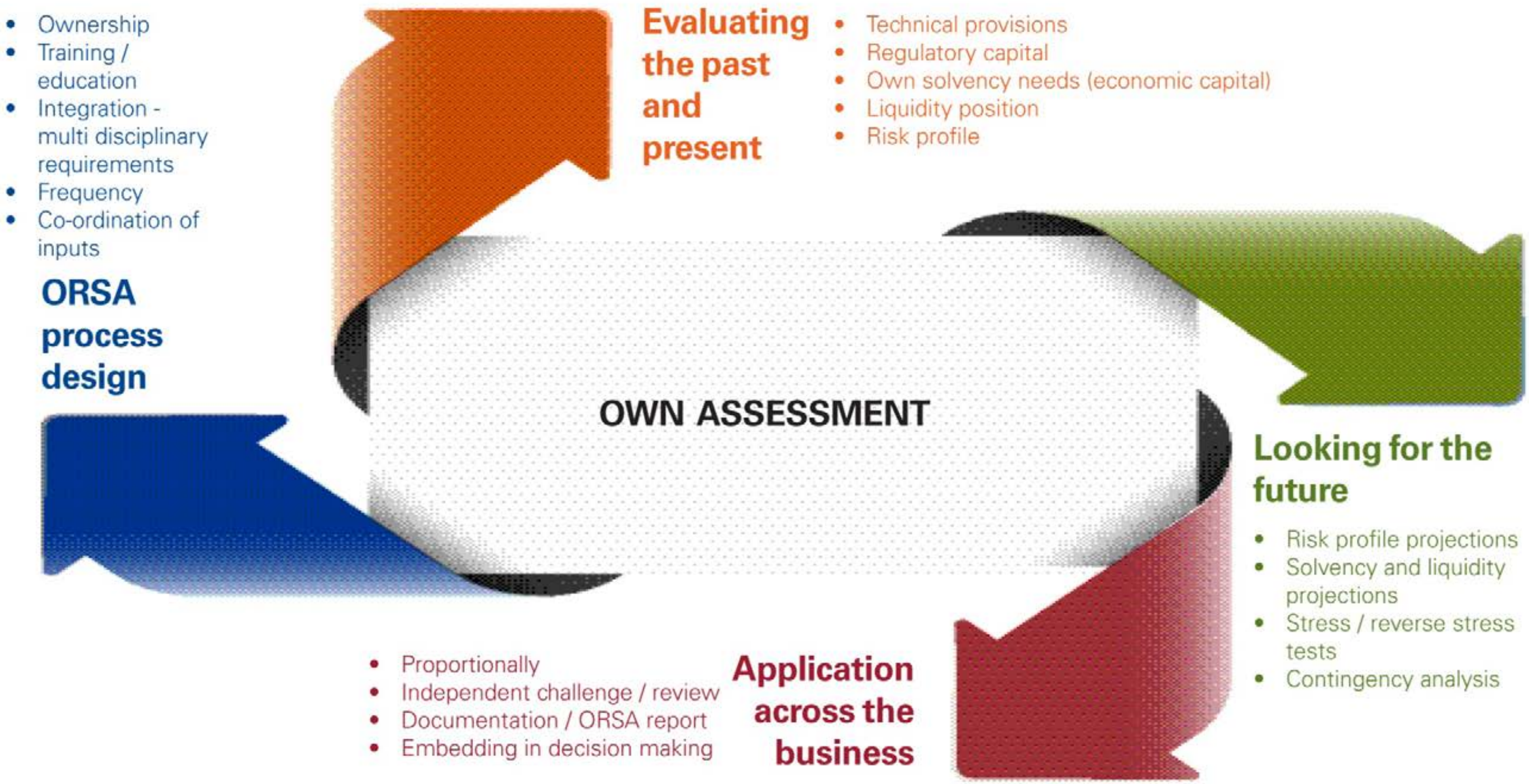
To meet the requirements of the ORSA, the following key components must be in place:

- A robust risk management framework (ERM)
- A robust capital management framework
- A clear business plan and strategy
- Risk and capital management linked to business strategy
- Evidence of using risk assessments to influence senior management decisions
- Risk and capital identification being forward looking (e.g. stress and scenario testing)
- A robust ORSA process which is documented



Illustrating the ORSA in practice in Singapore

A common company-wide understanding – the different perspectives involved

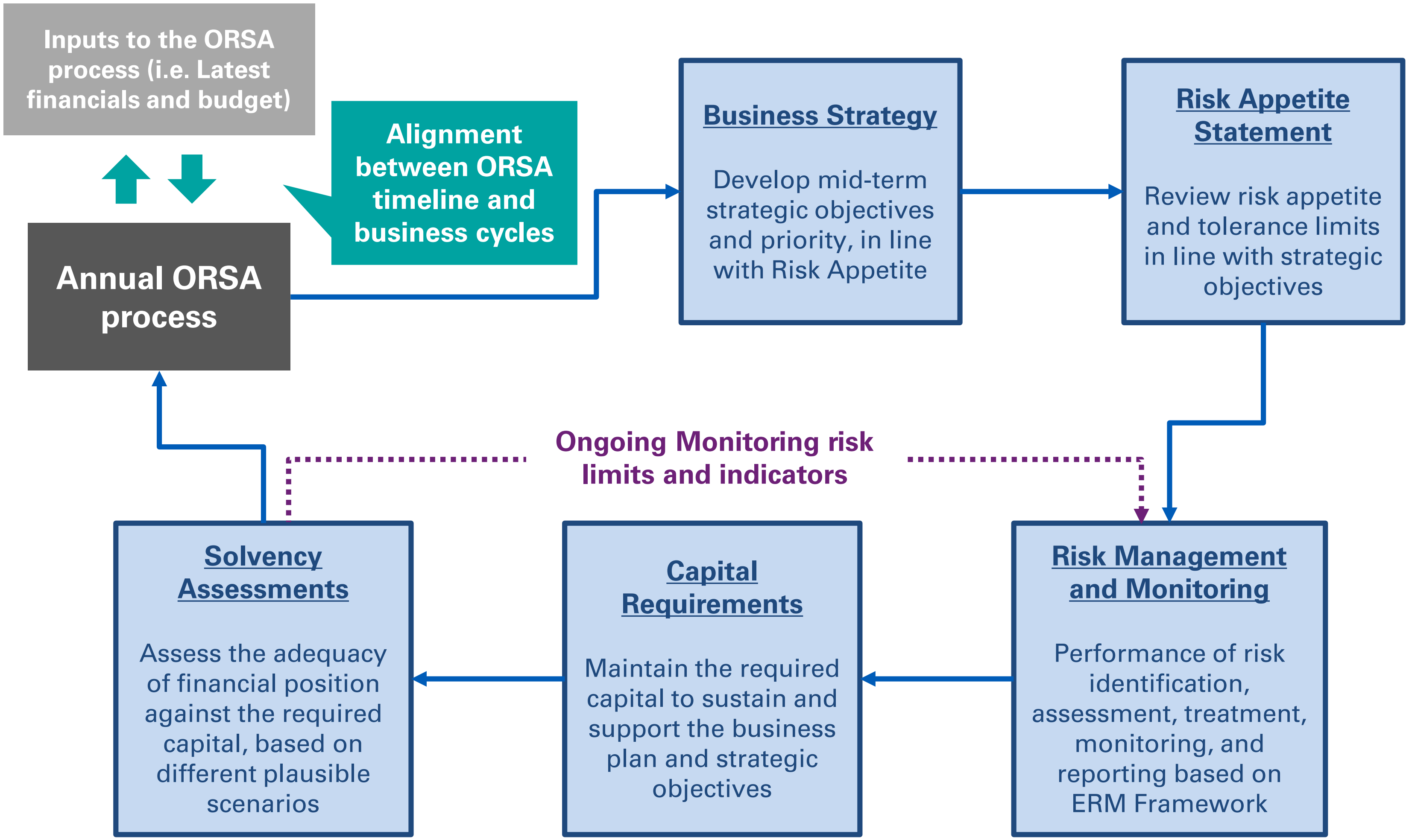


Establishing the right process is critical

Coherent and robust process	The focus of the ORSA is on the process and the outcome so the following questions should be answered – • How does it work? Who owns it and starts it? • How does the process include ensuring continuous compliance? • How does the process build in the forward-looking perspective? • How often is it run?
Multi-disciplinary approach	Given the requirements, many individuals across an insurer will need to be involved and the challenge is bringing the required expertise together in one coherent process and then demonstrating involvement of these areas

Stakeholders	Inputs	Assessments	Outputs	Customers
• Risk • Finance • Actuarial • Strategy • Underwriting • Internal audit	• Risk management framework (appetite, MI, emerging risks etc) • Capital management (current, future) • Liquidity • Stress tests and reverse stress tests • Business plan	• Current solvency • Projected solvency • Current risks • Future risks • Solvency needs • Liquidity needs • Risk-based stress tests	• Record of the ORSA process • Board discussion • Decisions made / considered	• Board / Committees • External Stakeholders • Business Functions

Good ORSA practices we observed in peer insurers



The forward looking perspective

Supporting the ORSA successfully within business planning / strategy:

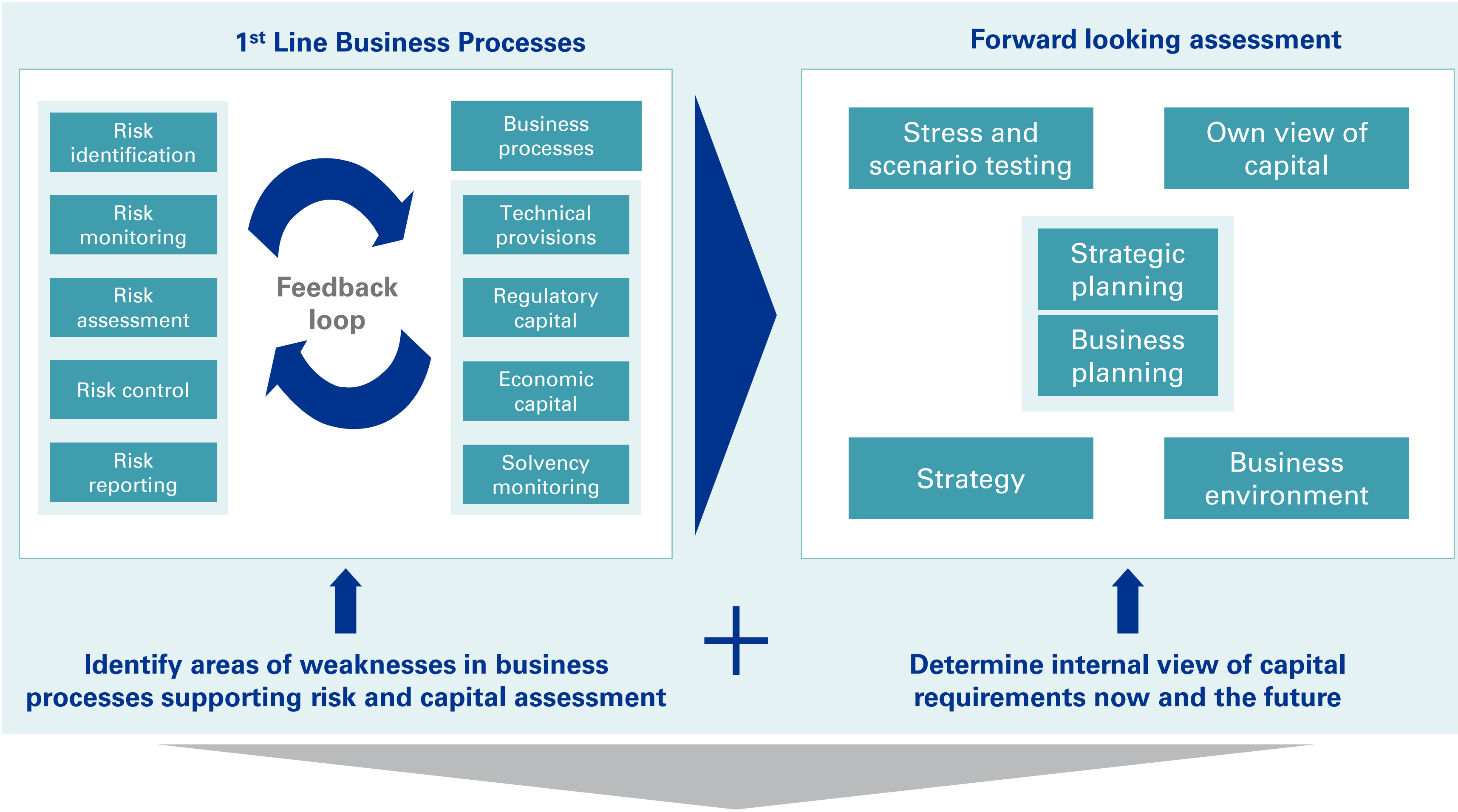
Historically:

- Business plans have contained details on new products / initiatives, P&L projections, budgets / expenses etc
- Projected balance sheet and a projected cash flow

Current practice:

- Now – to support the ORSA – business plans have a variety of capital projections (regulatory and own view / economic), liquidity assessments, stress testing and emerging risk analysis
- A greater level of sophistication in capital management is being used in business planning (e.g. projections under different scenarios on different bases)
- The stakeholder involvement in developing the business plan is changing with the CRO playing a key role in this process now
- The risk team is then seen as key to help deliver the strategy with finance monitoring

Linking the ORSA to decision-making to derive value



Driving value from risk management through efficient decision making

Common practical challenges relating to ORSA

Challenge description	Mitigation
Documentation being fit for purpose/audience	Clearly defined outputs
Setting the timetable/coordination of activities	Documenting the process
Linking the ORSA to decision-making and business plan	Integrating with the annual cycle
Ensuring integration of respective inputs through assessment stage	ORSA linkages well established
Ensuring stress/reverse stress tests are meaningful	Link stress/reverse stress tests clearly to risk profile
‘Production time’ and consistency of metrics (especially if the risks are volatile)	Resource allocation
Ensuring there is a common understanding of the ORSA across the company	Clear definition and training
Capital projections aligned to risk profile	Well development capital management

ORSA - Role of the Board

Some specific paragraphs from MAS Notice 126 that set out the Board's responsibilities:

- An insurer shall ensure that its board and senior management take responsibility for the ORSA.
- A licensed insurer which is not a Tier 1 insurer shall lodge its ORSA report with the Authority, within 2 weeks from the date the ORSA report is approved by its board of directors(…)
- An insurer shall submit to the Authority an extract of the minutes of the board of directors' meeting detailing the deliberations made by the board of directors on the ORSA report and the board of directors' approval of the ORSA report (the 'Extract of the minutes') at the time of lodgement of the ORSA report.
- If an insurer is unable to submit the extract of the minutes together with the ORSA report approved by its board of directors, the insurer shall undertake and confirm in writing to the Authority the date by which the Extract of minutes will be submitted to the Authority.
- The insurer shall submit the Extract of the minutes no later than 1 month from the date of lodgement of the ORSA report with the Authority.

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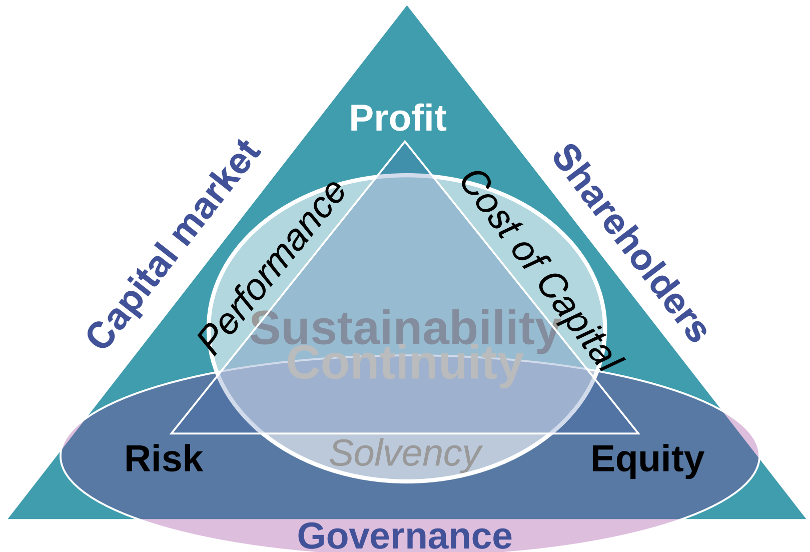
Good Practices we observed in Singapore: Capital Management

Economic Capital is part of the ERM Framework

- Shareholders will seek to minimize the level of capital held, subject to being able to attract and retain an ongoing stream of policyholders



Establish the optimal balance between risk, profitability and capital/equity to guarantee its sustainability

EC has become the key metric for assessing and quantifying risk within an Enterprise Risk Management (ERM) framework

Illustrating methods for calculating EC

What are the major steps for calculating EC?

- Develop an economic view of the business (projection of assets and liabilities)
- Identify key risks and determine level of stress to be applied
- Apply stresses to economic balance sheet
- Aggregate individual risk capital results, allowing for correlation effects

There are many different approaches to calculate EC, none better than the other, as long as you are able to explain your methodology, justify your assumptions and assess the results

MAS ERM Notice 126

- MAS proposes to allow insurers to adopt a simplified approach to economic capital calculations if based on nature, scale and complexity of their business and risks, the insurer deems this to be appropriate. The reasons should be clearly articulated and justified in the ORSA.

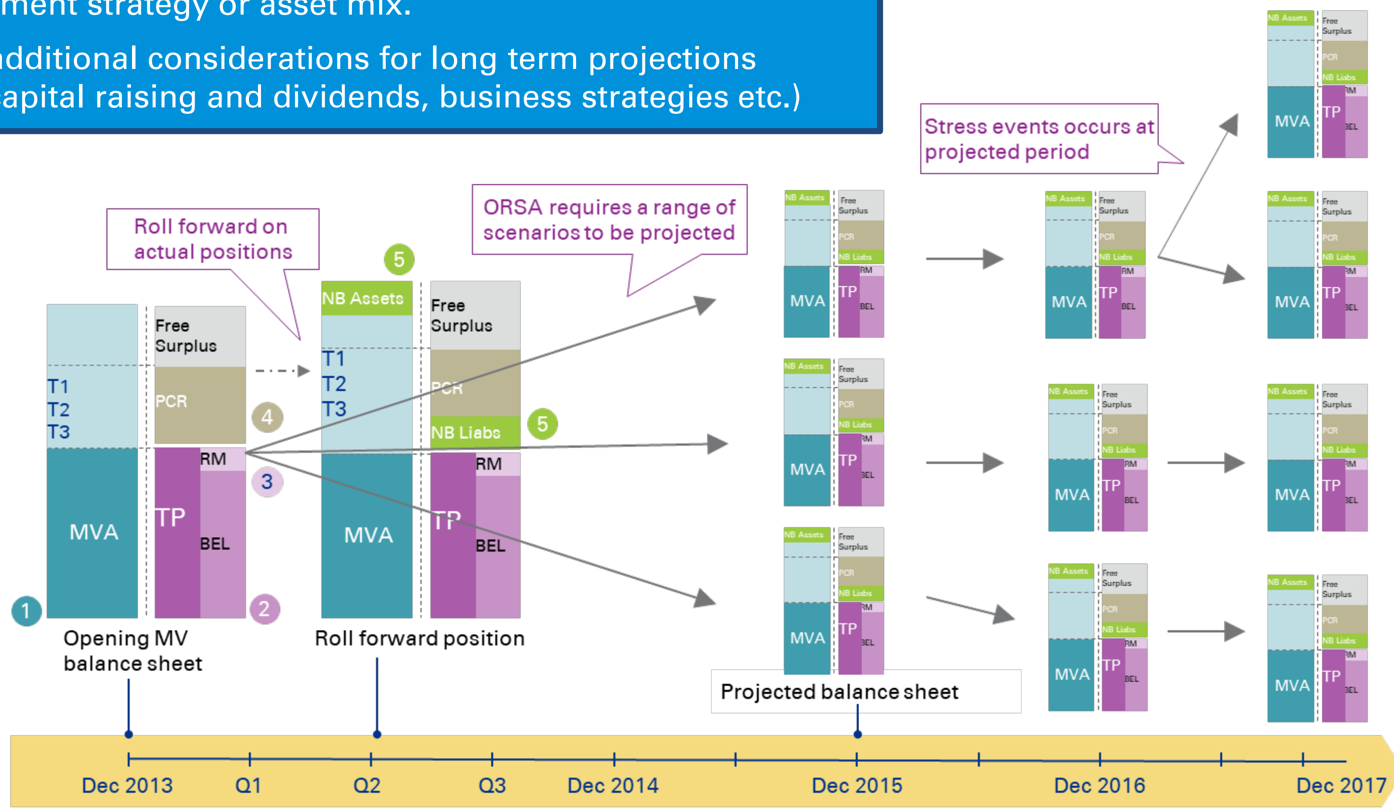
Methods for calculating EC - Capital projection

Projection methodology needs to be flexible and robust enough to cope with future business plans (including new business) and stress scenarios such as:

- Change in business mix/ risk profile;
- Significant market movements;
- Change in investment strategy or asset mix.

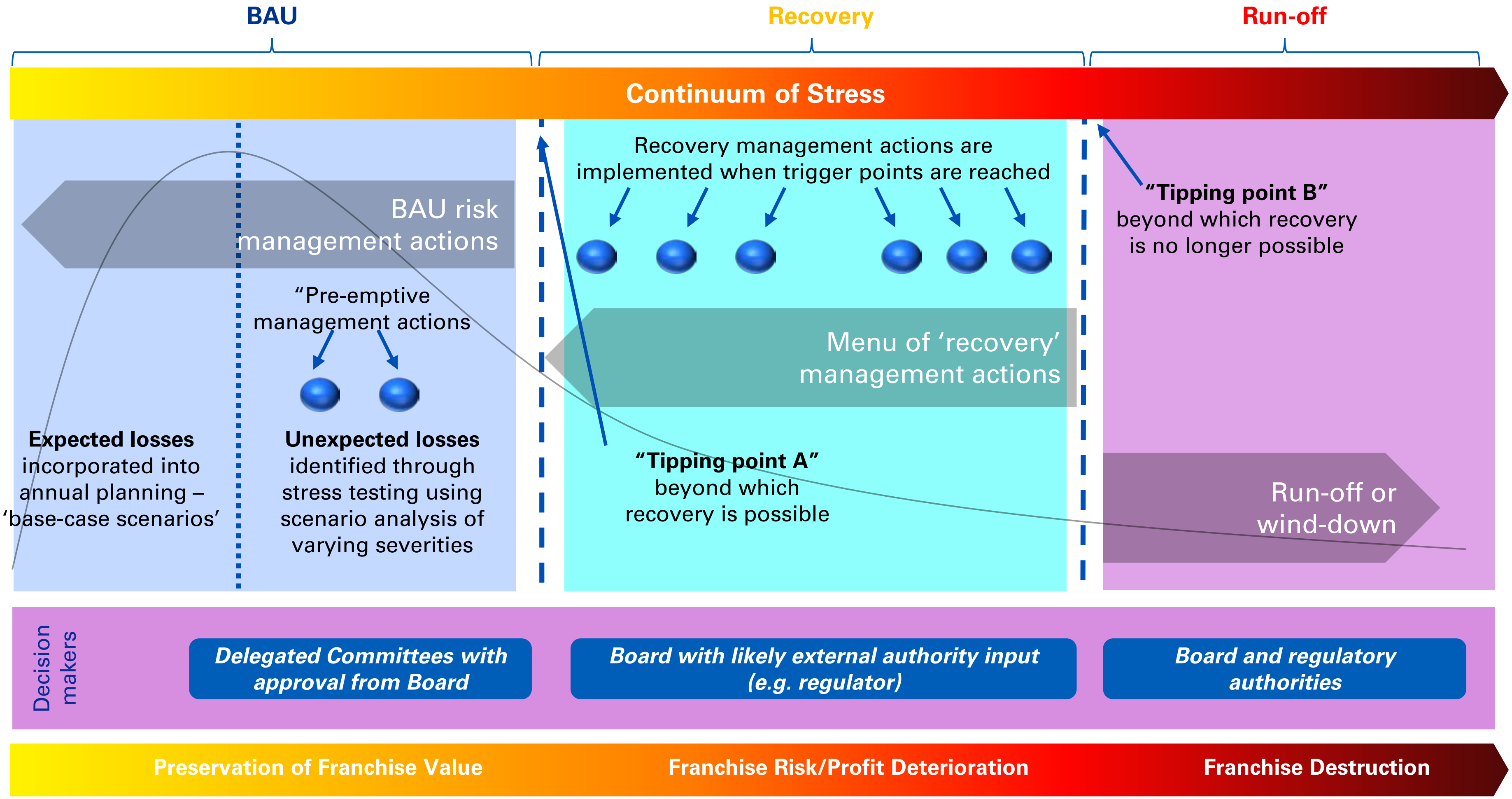
There are also some additional considerations for long term projections (i.e. insurance cycle, capital raising and dividends, business strategies etc.)

MVA – Market Value of Assets
PCR – Prescribed Capital Requirement
TP – Technical Provisions
RM – Risk Margin
BEL – Best Estimate Liabilities



The continuum of stress…

It is important to understand where scenarios fit on the continuum of stress and to consider a range of scenario so that the full range of the continuum is analysed.



Key observations from MAS after 1st submissions

MAS issued an information paper arising from its review of the Own Risk and Solvency Assessment (ORSA) reports submitted by the industry as required under MAS Notice 126. This section provides guidance on how insurers can better implement and benefit from their ORSAs.

Board Deliberations

MAS notes from its reviews that it was often unclear from the minutes if the **board had engaged in active discussion** with management on the information contained in the ORSA report.

Risk Governance Framework

Many insurers adopted a **"three lines of defence"** framework. However, it was not always clearly articulated which business units/functions constituted each line.

Risk Tolerance Statements

The insurers with better ORSA reports had **clear risk tolerance statements and limits** that incorporated both quantitative and qualitative elements.

Risk Management Process

Greater attention should be given to: **group risk, emerging risks** (such as cyber or environmental risk), and **dependencies between different material risks.**

Continuity Analysis / Stress test

In conducting continuity analyses and stress tests, Insurers should consider **the impact to individual insurance funds.** Insurers' material risks should be appropriately stress-tested and considered.

Sound Practices - Board Deliberations

(i) The board should have **robust deliberations** that centre on **material and emerging risk** areas and their impact on the insurer.

(ii) The board should ensure that the insurer has assessed the impact of, and considered the mitigating actions for, **an adequate range of plausible stress scenarios**.

(iii) The board should ensure that a clear process has been established and followed to **incorporate the findings from the ORSA in the business planning process** of the insurer.

(iv) The board should, where appropriate, **provide guidance to management on how the ORSA process can be improved**, and how the ORSA report can be enhanced to facilitate its use in discussions and decision making.

(v) Insurers should adequately **document the deliberations and decisions** of the board of directors in the minutes for proper follow up.

Sound Practices - Risk Governance Framework

(i) Insurers should **clearly define the roles and responsibilities of business units/functions in their risk management framework** to ensure proper accountability. Insurers should also clearly articulate how these roles and responsibilities come together to achieve the objectives of their risk management framework.

(ii) Insurers should **regularly assess the effectiveness of their risk governance frameworks** as part of their ORSA process. Where there are gaps in the risk governance structure, insurers should identify appropriate measures to address the gaps. Insurers should document these assessments and the necessary follow up measures in the ORSA report to facilitate accountability.

Sound Practices - Risk Tolerance Statements

(i) Insurers should establish clear risk tolerance statements and set corresponding limits where appropriate. The terms and thresholds used in the risk tolerance statements and limits should be clearly defined.

(i) The board and senior management should consider the insurer's risk tolerance during the business planning process, and ensure that there is internal consistency between the risk tolerance and business strategy.

Sound Practices - Risk Management Process

(i) Insurers should have a **clear framework to identify relevant and material risks, including emerging risks** (e.g. cyber or environmental risks), business risk, strategic risk, group risk, regulatory risk, and risks arising from changes in the macro-economic environment.

(ii) Insurers should take into account **relationships between material risks** during the risk assessment process.

(iii) Insurers should clearly **articulate material risks and their corresponding risk indicators**, risk monitoring processes and risk owners in the ORSA report.

(iv) Insurers should clearly articulate **changes in their risk profiles from the prior year (if any).**

Sound Practices - Continuity Analysis and Stress Test

(i) Insurers should ensure that a sufficiently **broad range of plausible stress test scenarios** that are reflective of their key risks are used.

(ii) The results of the stress tests and reverse stress tests should serve as **effective inputs for risk management decisions.**

(iii) Insurers should consider the impact of **stress tests and the action plans** holistically and at each insurance fund level.

(iv) Insurers should assess and clearly articulate the **feasibility and adequacy of action plans** identified to address the stress test scenarios.

(v) Insurers should state the reason for **adopting regulatory capital as their economic capital, where applicable.**

3.0

Conclusion

Emphasis of ERM and ORSA in Singapore

- **Exploiting the ORSA for Business Planning** through integrating risk assessments and capital planning within the business strategy and overall business planning cycle.

- **Increasing focus on the assessments of emerging risks and risk inter-dependencies**

- **Increasing considerations for non-financial risks**, such as strategic and operational risks

- **Greater consideration of economic capital**, in addition to the required regulatory capital frameworks

- **Establishing relevant stress testing scenarios linked to the risk profile**

- **Drawing insights from a thorough assessment of management actions** in response to the stress test scenarios

Board and Senior Management involvement is key

Involvement of the Board and Senior Management is a critical aspect of an effective and successful ORSA

1 Strong tone at the top

- The Board / Senior Management team provide support for the production of ORSA

2 Frequent Board Engagement

- The Board is kept informed of the latest ORSA development
- Board is engaged early (for the ORSA process)

3 Challenge at Board level

- The Board is equipped to challenge senior management team on the ORSA outputs.
- ORSA training is provided to the Board

Questions?

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