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Risk Appetite: how can it help us to understand, control and master risks?

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Overview

- Risk appetite terminology
- Why have a risk appetite
- What CROs are saying about their risk appetite
- How do life insurers compare
- Considerations for the future
- Case study: cyber risk appetite
- Summary

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Risk Appetite

Terminology

What is risk appetite?

- Risk appetite describes the risks to which the company is exposed and the amount of exposure it is willing to assume from those sources of risk
- Establishes boundaries for the aggregate level / types of risk a company is willing to take to achieve its objectives
- Risk appetite statements include unacceptable and preferred risks and company-wide risk tolerances
- Qualitative and quantitative dimensions, resulting in multiple ways of expressing risk appetite
- The most common group-level risk appetite statements cover:
  - Capital, earnings, liquidity, and franchise value

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Terminology: risk appetite, risk capacity, buffer, and risk tolerances

Risk Appetite	The aggregate level and types of risk a firm is willing to assume within its risk capacity to achieve its strategic objectives and business plan
Risk Capacity	The maximum level of risk the firm can assume before breaching constraints determined by regulatory capital and liquidity needs and its obligations, also from a conduct perspective, to depositors, policyholders, other customers, and shareholders
Buffer	One issue is how big the buffer between appetite and capacity should be. The buffer should consider possibility of very extreme outcomes and modelling error
Risk tolerances	Quantitative measures and qualitative assertions for maximum risk allowed by appetite. They should be measurable and reported and monitored by the Board and senior management

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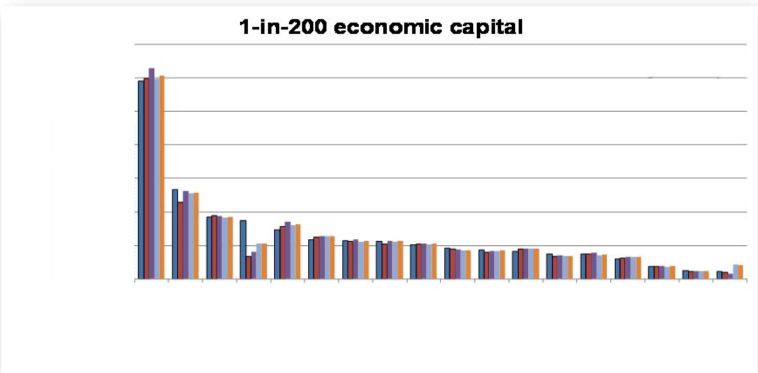
Risk profile

Risk profile is a point-in-time assessment of risk exposures, expressed in relation to risk limits, risk tolerances, and risk capacity.



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Example top-level risk appetite statements

- The company seeks to maintain an "AA-" Insurer Financial Strength rating from at least two of the three major Rating Agencies
- Sufficient economic capital will be held to cover economic liabilities with a level of confidence over a 1-year time horizon equivalent to an AA rating strength at group level
- Maintain capital consistent with an “AA” financial strength rating for the Group
- Target an "AA" rating and be in the top quartile relative to peers
- The group should maintain sufficient capital to satisfy: (1) S&P AA rating; (2) 150% Solvency I coverage; and (3) specified Economic Capital and Liquidity loss criteria
- The level of risk that the Board and management are prepared to take in pursuit of the organisation’s objectives

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Why have one?

Why do cars have brakes?

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An effective risk appetite framework is critical to the success of a firm

Informs strategy
- A constant in an ever-changing environment
- Sets the boundaries for the firm
- A framework for evaluating opportunities

Makes risk culture tangible
- A mechanism for articulating and measuring the behaviours of the firm
- Underpins individual accountabilities

Supports better pricing for risk
- Brings together an enterprise view of risk
- Provides transparency on the cost of risk

Optimising resources
- Supports risk-based allocation of capital and liquidity resources
- Provides areas of focus for risk resources

Understanding and managing stress
- Informs scenario design
- A frame of reference for stress outputs
- Links to recovery and resolution planning

A focus on firm-wide thinking
- Brings together risk and business lines to support better firm-wide decision-making
- Supports informed decision-making

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Risk preferences

50 %
chance of
£100

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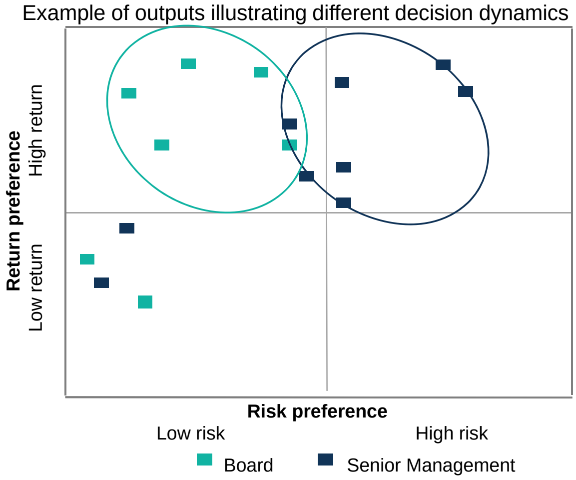
Being aware of differing risk preferences

Example of outputs illustrating different decision dynamics



In this example:

- Overall, the Board has a more conservative approach to high risk / high return activities than the Senior Management team
- A few individuals have a more cautious approach within each of these senior governance bodies.

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Do our current frameworks allow CROs to Understand, Control and Master Risks?

Expertise Sponsorship Thought leadership Progress Community Sessional Meetings Education Working parties Volunteering Research Shaping the future Networking Professional support Enterprise and risk Learned society Opportunity International profile Journals Support

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2017's focus areas for CROs – from EY's UK CRO survey

- CROs are spending 20 – 40% of their time on SII related activities.
- Given this time commitment, we see CROs looking at ways to:
  - Get value from, and embed, the Own Risk and Solvency Assessment;
  - Evolve risk appetite frameworks;
  - Develop emerging risks; and
  - Embed model validation and change.

*"It's about **bringing some sense back** and communicating that **Solvency II was only a means to an end**"*

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What CROs are saying about the business's risk appetite frameworks, and their concerns on risks

*"**These things take time** - it feels like a roadmap is needed even though we're now out of Solvency II project mode"*

*"We need to make risk appetite **real** through scenario development and **show the Board what breaches mean by way of scenarios**"*

*"**Cyber will be a big area of focus** for the next few years"*

Current challenges

There are a number of challenges, and with each there are missed opportunities:

Lost opportunities

- **Well-articulated risk appetite statements (understood at senior levels) lose day-to-day relevance further down in the organisation.**
- **Inability to easily pinpoint the existing 'strength of risk mitigation' activities in the business on material risks.**
- **Risk and Control Self-Assessments (RCSAs) in the 1st Line are of sub-optimal quality and 'drift' from the risks that really matter.**
- **Aggregation of individual 'early warning signs' at the business process level.**
- **Stronger risk / control culture in the 1st Line, who use risk / control data to reduce the 'fear of losing'.**

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How do life insurers compare?

Risk metric benchmarking

	Group
Credit Rating	
Economic Capital Solvency ratio	
Regulatory Capital Solvency ratio	
Value/return IFRS or EEV operating profit, Total profit, Economic profit	
Cash/Liquidity	
Other Franchise value	

- In the majority of cases a credit rating target forms a basis around which the risk appetite metrics hang. These metrics are usually capital, value/return, and liquidity.
- We also see some other statements such as a desire to be in the top quartile with regard to peers, and to not diminish franchise value in the eyes of stakeholders (customers, people, shareholders and community) over the longer-term.

Legend: companies who use the respective metric as a percentage of the total number of companies reviewed:

:no companies :1-33% of companies :34-66% of companies :67-100% of companies

Source: EY's 2015 Risk Appetite benchmarking survey

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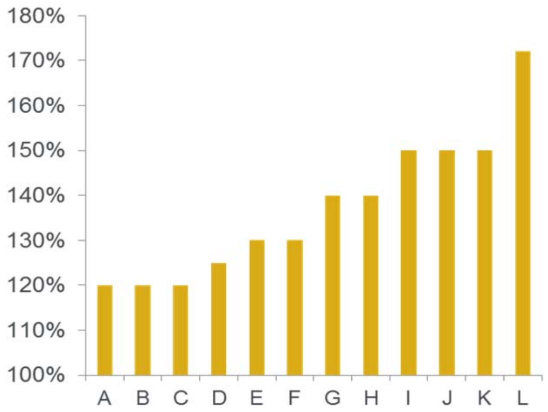
Target capital buffer level that UK Life Insurance companies are targeting



Source: *EY Pillar 1 survey*

- We see a wide spread of SII buffers
- Dependent on:
  - Capital basis (SCR or SF);
  - Rating agency expectations; and
  - Whether or not the entity is part of a group.

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Approaches we are seeing firms using to calculate their Solvency II buffer

Company	Buffer, and, where available, buffer philosophy
A	Maintain an AA rating to manage its solvency position in terms of financial strength, a balanced and diversified business portfolio and stable returns to investors
B	1-in-20 buffer on SCR
C	Target a AA rating and use a 99.97% stress
D	Target a 1-in-25 buffer on the regulatory solvency requirements with an Amber Zone trigger at 1-in-10 buffer on the regulatory solvency requirements
E	Hold capital equivalent to their current target which is 140% of Solvency I Pillar 2. They say their solvency ratio target under Solvency II will migrate to a level that reflects the volatility of the balance sheet under Solvency II, is consistent with a peers, does not adversely impact new business, and provides an appropriate level of security for customers
F	Operating entity: target range after stress of 100 – 130 % Group: target range before stress of 180 – 200 %; target after stress of 145 %; dividend target (after stress) of 160%;
G	Execution Action Plan level: 90 %; Action plan level: 110 %; Warning level: 125 %; Upper Warning level: 140 %; Upper Action Plan level: 150 %; Upper Execution action Plan level: 160 %. Target appetite: 135 %
H	1-in-30 buffer on SCR
I	Target 185 – 220% for Group Solvency
J	UK: 125 – 140%; Group 140 – 170%
K	> 130 %
L	170 – 230 %

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Elements of a good framework

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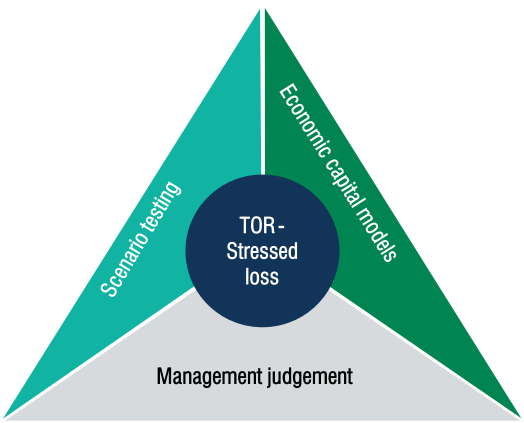
Establishing a common language for risk



- “Stressed loss” focuses on the amount of capital the board is prepared to lose under a stress scenario:
  - Over one year under normal conditions
  - In a downturn scenario
  - In an extreme scenario and still maintain viability as a business
  - This defines Target Operating Range (TOR)
- The starting point for defining TOR is typically the economic capital model. However, this only captures a proportion of underlying risks
- Scenario testing combined with management judgement enables an approach focused on the specific events the board feels will threaten the organisation (at Entity and Group levels)
- “Stressed loss” is determined by triangulation across scenario testing, economic capital models and management judgement, using an iterative process

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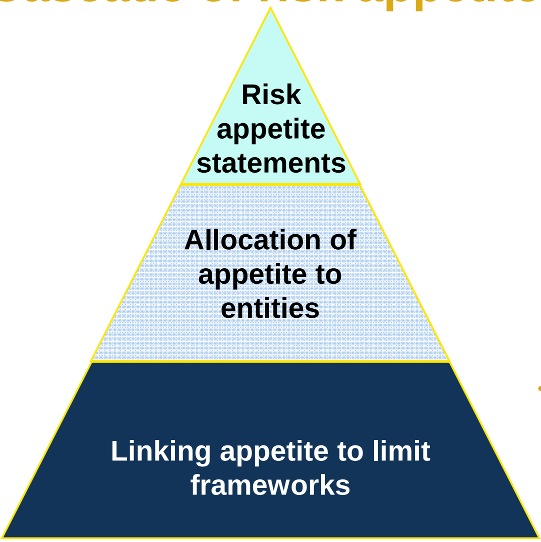
Cascade of risk appetite across the organisation



- Limits must be set aligned to the risk appetite that are:
  - Specific to BUs and risk type and proposed by them
  - Validated by the group as being appropriate
  - Supported by day-to-day monitoring and control metrics to deliver risk appetite limits

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The risk appetite “ski slope”

A robust risk appetite framework helps to prevent firms going “off piste”

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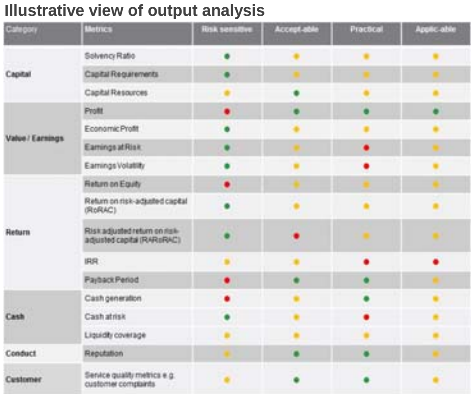
What makes an effective metric?

To assess the effectiveness of metrics supporting the firm's risk appetite framework we generally consider the four criteria described below. We typically perform an analysis of the metrics used against these criteria to identify potential gaps, using our insight to facilitate the discussion with key stakeholders as to the pros and cons related to each metric. An example output is shown alongside.

Risk sensitive	• Is the metric an appropriate reflection of the **risks** underlying the portfolio? Is it comprehensive and considers both sides of the balance sheet? • Often via risk-adjusted return or risk-adjusted capital
Acceptable	• Is it easy to communicate to internal stakeholders for decision making? • Is it easy to understand for external stakeholders? Is it a well-recognised metric?
Practical	• Is it easy to report, in respect of the required effort to calculate or model? • Is the information already available at Group?
Applicable	• Is the metric stable for continuous performance monitoring? • Does it give the right incentives? • Is targeted value easy to calibrate, and easy to compare against other portfolios or peers?

Illustrative view of output analysis



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Considerations for the future

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Embedding risk appetite is challenging: you cannot embed what is not…

A priority	… buy-in and 'tone from the top'
Available in time	… frequency and performance
Understood	… senior understanding and training
Consistent and reliable	… coherent cascade through the business, robust controls
Representative of your business	… fit to the risk profile
Forward looking	… projection capabilities
… (this is not an exhaustive list)	

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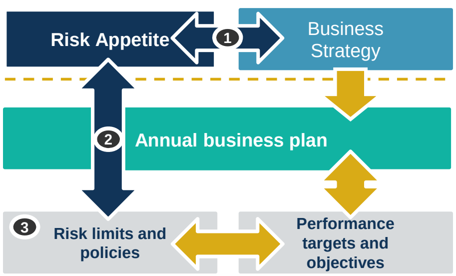
Linking risk appetite with business strategy

- Regulators are increasingly looking for how firms are embedding risk into the strategic planning process
- Particular emphasis needs to be given to non-quantifiable risks, particularly in areas such as new product approvals



1. Risk provide forward looking insight and challenge to the strategic planning process – risk and customer needs are considered up-front, not as an afterthought.
2. Better quality annual planning – business plans are achievable within the risk appetite. Broad range of assumptions are used in the planning process – not exclusively economic / financial.
3. Risk limits and policies calibrated to the risk appetite (top down and bottom up). Well defined and suitable risk metrics are used to monitor risk, including embedding risk metrics in personal targets.

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Forging a stronger link between risk appetite and risk governance

We see using a 'value chain' concept as a pragmatic way of enabling both the cascade and roll-up:

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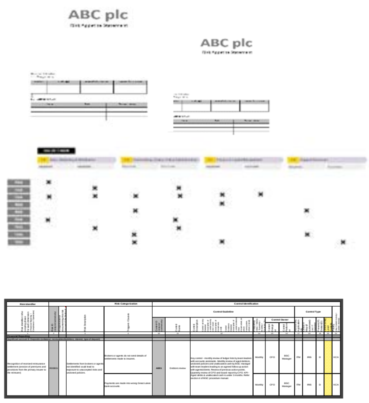
Value Chain

Risk and Control Self Assessment



Risk Appetite statements are revisited on periodic basis and appropriate metrics / limits set (as good practice).

The Value Chain brings focus – identifying the areas in the organisation where inadequate risk mitigation could cause significant exposures. This is for existing risks but also in assessing the potential impact of emerging risks.

RCSAs are anchored to the Value Chain, so that individually they stay relevant to the risks that really matter.

Easier monitoring of how current & emerging risks are managed

Clarity on where real exposures lie in the business

Properly 'connected' top down & bottom up challenge

1st Line control culture targeted to 'risks that matter'

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Next steps

There are options in bridging the gap between risk appetite and RCSA activities:

Moving forward

- **Establish a pragmatic, tailored value chain**
- **Run a pilot – on an existing inherent risk <u>and</u> an emerging risk**
- **Use as an opportunity to assess the quality, relevance of existing RCSAs, and how effective in supporting an embedded risk**

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Case study: cyber risk appetite

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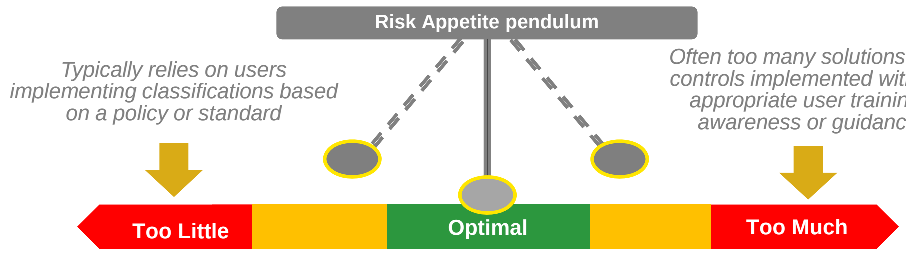
Getting the balance right: defining and delivery of the optimal level of control



- Little emphasis on classification of key processes, systems, and models
- Limited user understanding and awareness
- Difficult to know where the problem resides and where spend on control improvement produces benefits

- Oversight and monitoring backed up by governance and awareness
- Aligned to key processes, models, and systems
- Pragmatic and manageable

- Restrictive controls leading to 'work around' behaviour
- Classification of processes, systems, and models becomes too complex
- Reduced system functionality

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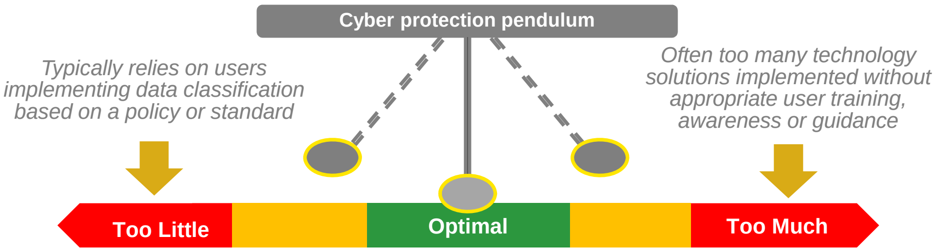
Getting the balance right: is it very different for cyber risk?



Too Little

- Limited ability to detect sensitive data loss
- Little or no ability to emphasise or support data classification
- Limited user understanding and awareness
- Difficult to know where the problem resides and where spend on control improvement produces benefits

Optimal

- Oversight and monitoring backed up by governance and awareness
- Protection aligned to sensitive data types
- Pragmatic and manageable

Too Much

- Restrictive controls leading to 'work around' behaviour
- Data classification becomes too complex
- Focus lost on important data assets thereby increasing risk of loss
- Reduced system functionality

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Is cyber risk any different to any other risk in how we should treat it?

Cyber risk should integrate fully with existing risk management practices; risk appetite is an essential element of any risk management framework and for cyber risk this is no different

Key risk management principles…	…applied to cyber risk
1 **Focus on what matters most:** must align to your unique business and risk culture	**Know your critical information assets:** Identify critical business assets most vulnerable to cyber attack
2 **Allocation of risk appetite:** Allocation of appetite to business units and risk types	**Make cyber relevant to the business:** Link Group-level risks to individual BUs and their information assets
3 **Comprehensive in nature:** Should cover all risk types, current and forward looking	**Align with existing risk frameworks:** Financial, Operational, Regulatory, Customer, Reputation, etc.
4 **Measure and report:** Include qualitative statements and quantitative measures	**Make cyber risk more tangible:** Clearly define cyber risk and underlying metrics
5 **Integrate with business planning:** Regulators are increasingly looking for evidence	**Embed risk appetite in decisions:** Empower businesses to make informed local decisions

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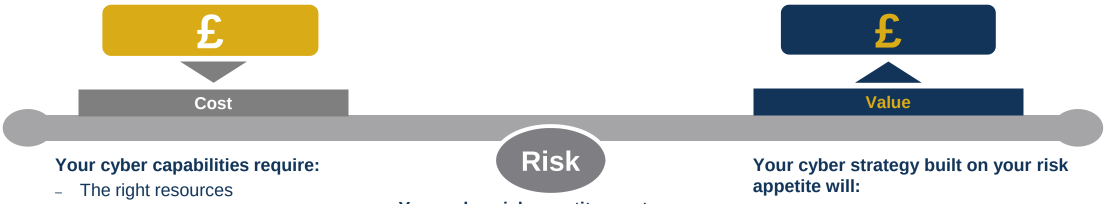
Clarity over effort and cost in enhancing the control environment and value created is key

Your cyber risk appetite must consider the balance between an appropriate level of resources focussed in an optimal manner.



Your cyber capabilities require:

- The right resources
- The right focus
- The right processes and technologies
- The right investments

Your cyber risk appetite must :

- Be aligned with overall business strategy, risk appetite and tolerance
- Set the tone for your organisation
- Enable you to make the right business decisions / investments

Your cyber strategy built on your risk appetite will:

- Keep you competitive
- Protect brand and reputation
- Enhance user experience
- Protect assets of most importance to you
- Enable innovation

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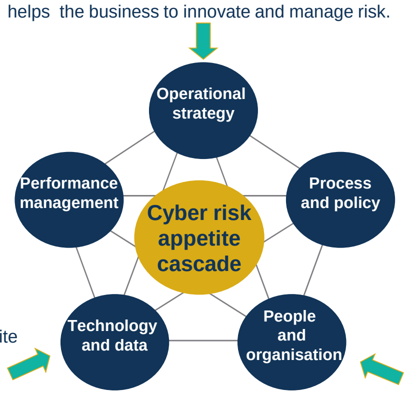
Building a comprehensive cyber risk appetite

The risk appetite should enable leadership to understand, monitor and discuss how cybersecurity helps the business to innovate and manage risk.

Risk appetite should be linked with performance management and remuneration to ensure that desired behaviours are incentivised and rewarded.



Risk assessments should enable an understanding of exposures and identify acceptable levels of risk. Focus on assets, external interdependencies, threat vulnerabilities, controls, and testing activities. Appetite is regularly stress tested via rehearsal of incident response capabilities

Firms should understand their most vital informational assets and their value. Risk appetite should reflect this by prioritising the protection of critical systems and information.

A culture where everyone understands the need for strong governance, user controls and accountability for cyber risk. Cyber threats are constantly evolving and risk appetite for cyber risk should drive change. Appetite should extend to cover the firm's broader network including suppliers.

Bringing it together: key steps to deriving your cyber risk appetite

1. Definition of critical assets
Assets to include both data and infrastructure systems

3. Impact analysis
Loss data from both internal and external sources amalgamated to determine impacts under normal business conditions

5. Target risk appetite developed
Appetite across a range of probabilities identified

7. Actual appetite against target risk appetite
Analysis of the actual appetite against defined level (step 5)

2. Valuation
The assessment of the value of data and systems is multi-dimensional. Assessing both current value and future value

4. Structured Scenarios
Developed to identify the impacts under extreme circumstances

6. Controls assessment
The evaluation of the operation of controls to determine the residual level of risk

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Risk Appetite

Summary

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Summary

- Be aware of risk preferences within your organisation and consider how you can align your risk appetite to these;
- Appraise how embedded your risk appetite framework is: a well-embedded risk appetite plays a key role in multiple business processes;
- Ensure risk appetite metrics are appropriate and be aware of any shortcomings in the bases of calculating each one you use; and
- A risk appetite framework should be constantly evolving and changing to reflect external factors, such as increasing cyber risks and changes in technology, as well as internal factors, such as changes in strategy.

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Questions **Comments**

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The views expressed in this presentation are those of the presenter.

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