

# Welcome to Milliman's Risk Webinar

- The webinar will begin in a few minutes.

18<sup>th</sup> November 2020



# Virtual Meeting Best Practices

- Mute: As an attendee, you will be on mute automatically for the duration of the briefing.
- Video: Only presenters will be on video. Video is turned off for attendees.
- Q&A: Use the chat function within the meeting for questions.

## Agenda

Topic	Presenter
Welcome	Aisling Barrett
Solvency II Update	Patrick Meghen
ORSA: COVID-19 & other considerations	Eoin King
Effective Key Risk Indicators	Eamonn Phelan
Q&A session	Aisling Barrett

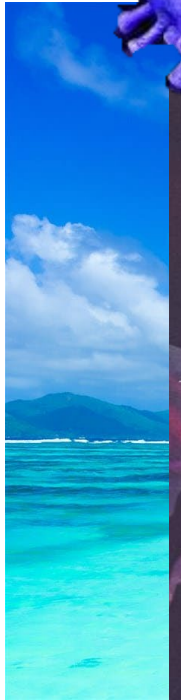
# Solvency II Update

Patrick Meghen

18 NOVEMBER 2020



# Where were your clients for 2020?



# Solvency II had big plans for 2020 too...

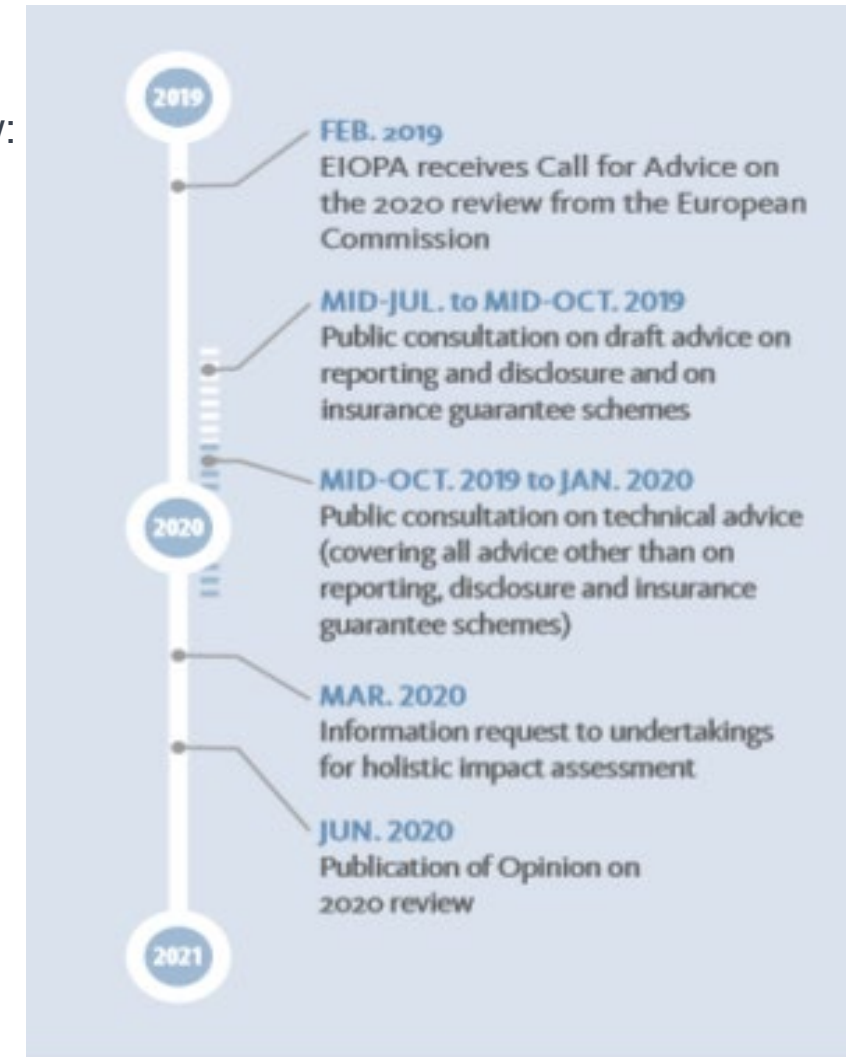
Solvency II Directive requires that, by 1 January 2021, the Commission shall review:

LTG measures and equity risk measures

Methods, assumptions & parameters used in calculating standard formula SCR

Calculation of the MCR

Group supervision & capital management



# But the best laid plans of mice and (wo)men..



Solvency II – stay at home

# So what has Solvency II been up to during the pandemic?

- Not that much has changed in Solvency II's life since March 2020.
- The deadline of the information request for the holistic impact assessment of the 2020 Solvency II Review was extended by two months, to 1 June 2020
- A supplementary information request was issued to a sub-sample of the previous request participants. This used a reference date of 30 June 2020 and was to be completed from July to mid-September 2020
- EIOPA's advice to the European Commission was delayed from end June 2020 to end December:  
*“EIOPA, in close coordination with the European Commission, has decided to deliver its advice to the European Commission at end December 2020, to take into account the importance of assessing the impact of the current Covid-19 situation on the Solvency II Review.”*

# What will 2021 hold in store for Solvency II



- See some new proposed regulatory text in Q3 2021
- So this is the new timeline for the commission's proposed text. But after that, how long will it take to be agreed by the legislators and then transposed into national law?

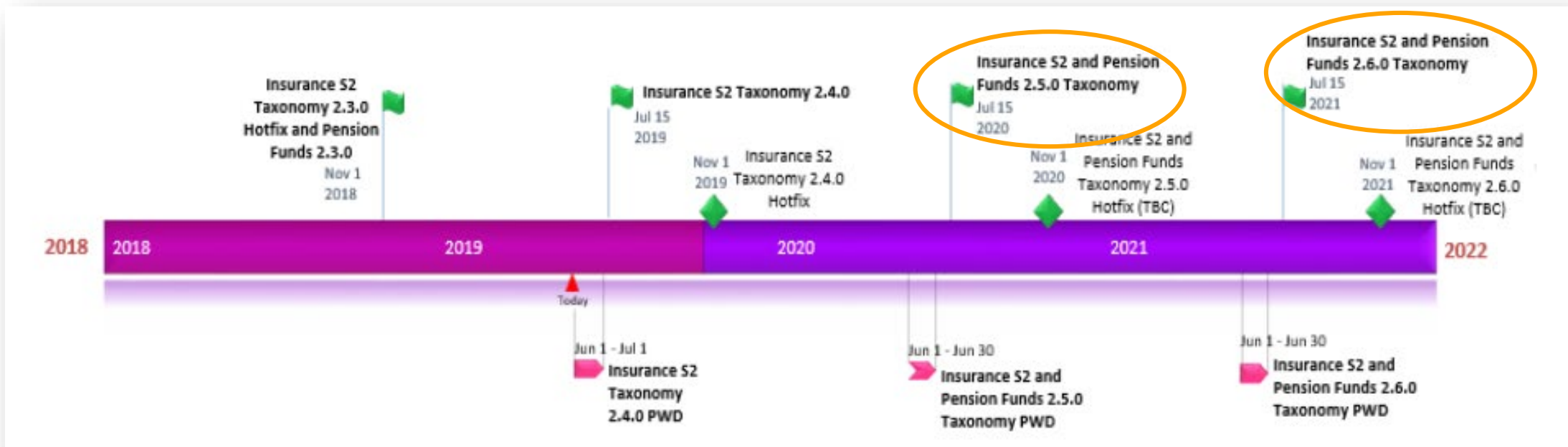


**So...any other news?**

# General schedule of taxonomy releases

EIOPA's planned updates to QRTs

- EIOPA have stated that they expect one taxonomy release per year but that there may be more than one in extraordinary circumstances (EIOPA [website](#))
- This update is part of Taxonomy **2.5.0**
- The next update, Taxonomy **2.6.0** is expected in July 2021.



# QRTs - Taxonomy 2.5.0 Changes

URL to download SFCR

Addition of the missing information in S.04.01.01

Relabelling a wide set of items due to the dash change from '–' to '-'

Minor typos addressed

Removal of the crossed-out cells in tables due to technical reasons

Crossing-out rows in templates that are not reportable

Addition of Ad hoc XBRL technical fields in SPV template

Additional consideration for Brexit and domain members

# Central Bank of Ireland – National Specific Templates

No 2020 updates

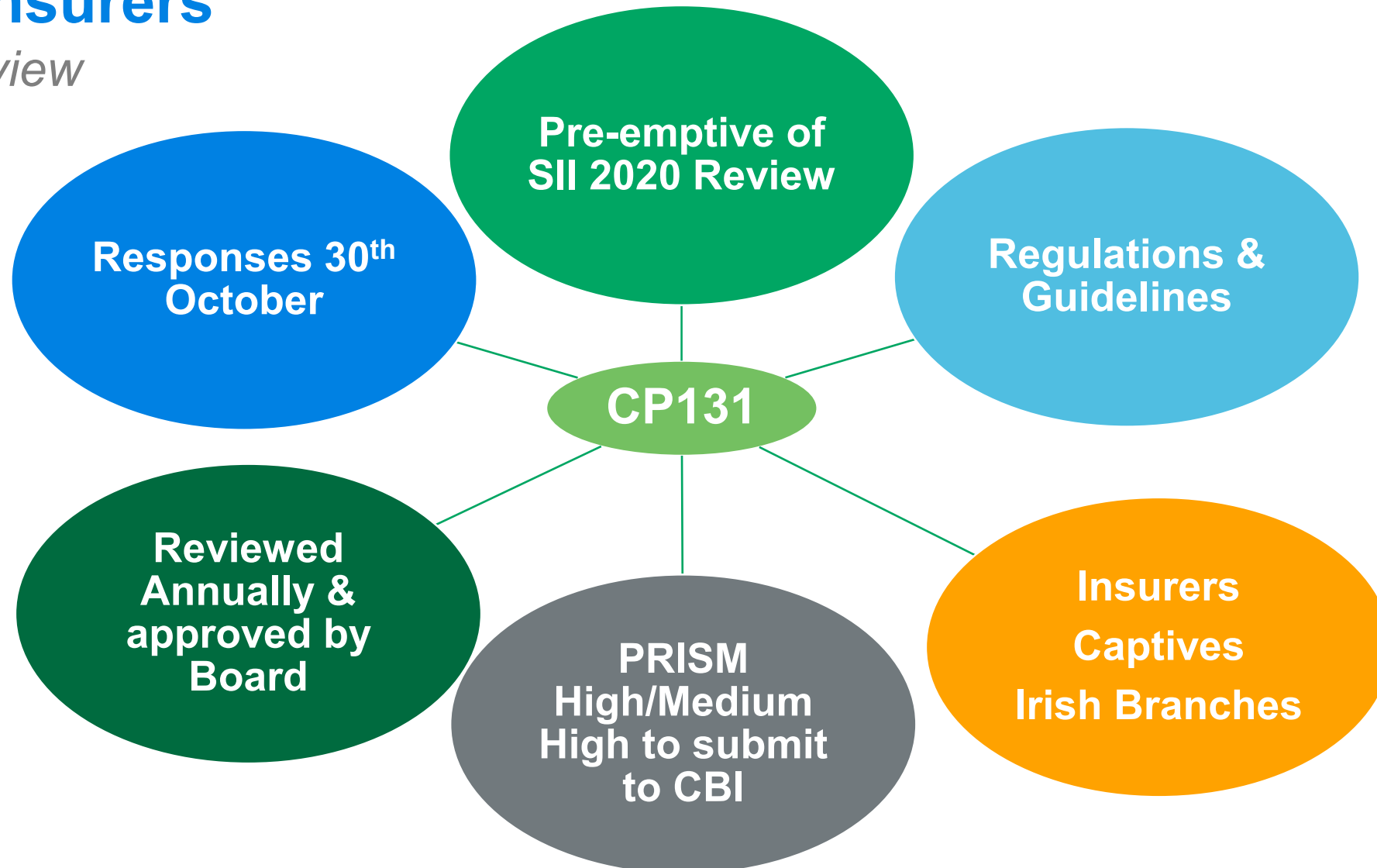
## DPM and Taxonomy - Version 1.5.0

There will no updated version of the NST taxonomy published in 2020

Source: Central Bank of Ireland [website](#)

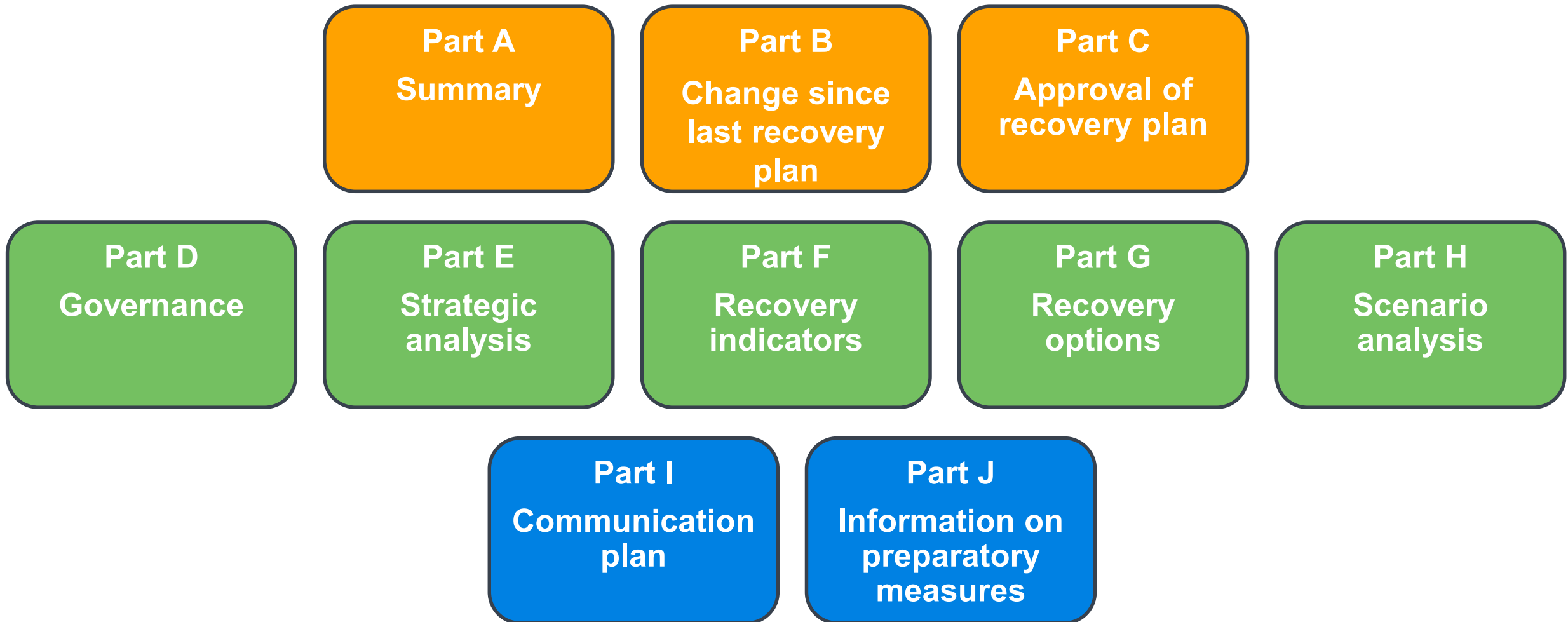
# CP131 - Regulations for pre-emptive recovery planning for (re)insurers

## Overview



# CP131 - Proposed layout of the recovery plan

*Proposed format of recovery plan*



# Quarterly SCR calculations

- **EIOPA Statement on Solvency II supervisory reporting in the context of COVID-19**
  - *Solvency II solo quarterly Own Funds template (S.23.01) with a reference date between 30 June and 31 December 2020, a calculation (if it is available as of reference date) or at least an estimation of the Solvency Capital Requirement at the end of each quarter reference date instead of the last calculated one as indicated in the Instructions of the Implementing Technical Standards.*
- CBI wrote to all insurance undertakings on 7<sup>th</sup> September, outlining their expectation that the quarterly returns would include updated calculation (or at least an estimation) of the SCR. The resubmission of the previously submitted SCR (as currently allowed) will not be sufficient for reporting purposes.

Source: Central Bank of Ireland [website](#)

**Would you be happy if  
we moved to Level 3?**



# New EIOPA Level 3 Guidelines

Guidelines on information and communication technology security and governance

*“EIOPA identified the need to develop **specific guidance** on information and communication technology (ICT) security and governance in relation to Articles 41 and 44 of **Directive 2009/138/EC** ....*

These Guidelines shall  
apply from  
**1 July 2021**



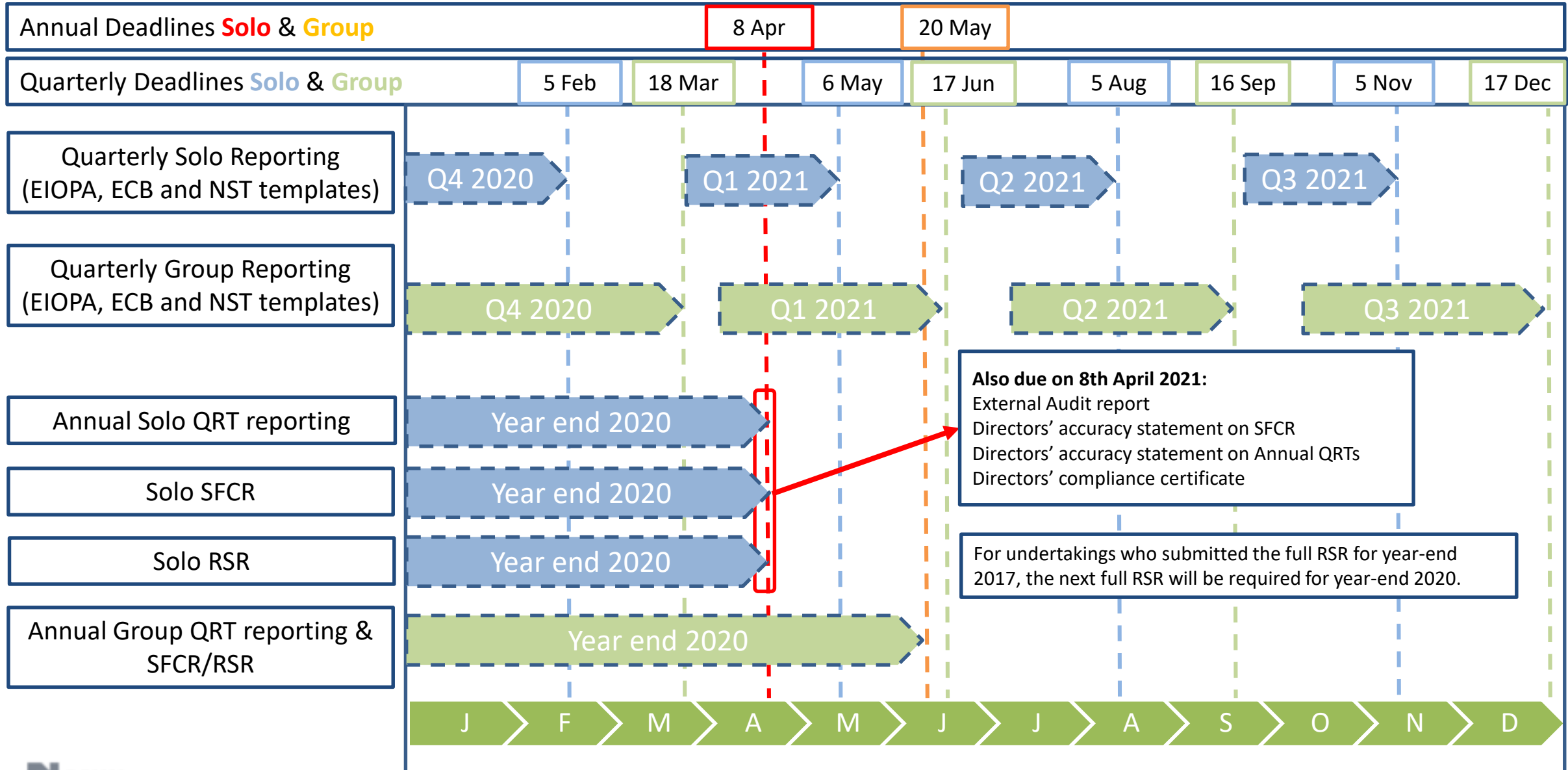
Source: EIOPA [website](#)

# 25 New Guidelines

Proportionality	ICT within the system of governance	ICT strategy	ICT and security risks within the risk management system	Audit
Information security policy and measures	Information security function	Logical security	Physical security	ICT operations security
Security monitoring	Information security reviews, assessment and testing	Information security training and awareness	ICT operations management	ICT incident and problem management
ICT project management	ICT systems acquisition and development	ICT change management	Business continuity management	Business impact analysis
Business continuity planning	Response and recovery plans	Testing of plans	Crisis communication	Outsourcing of ICT services and ICT systems

**Conclusion**

# Reporting Deadlines 2021



# In Summary

## What to know for Year-End 2020

Minor changes to EIOPA QRTs

No changes to EIOPA log files

No changes to the CBI NSTs



## What to expect in future

Recovery & Resolution

Level 3 Guidelines  
(June 2021)

Annual changes  
expected to the QRTs

Delegated Regulations  
will see substantial  
changes again following  
the “2020 review”



# For more information:

<https://ie.milliman.com/en-gb/insurance/solvency-ii>

**Patrick Meghen**

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# ORSA: COVID-19 & Other Considerations

Eoin King

18 NOVEMBER 2020



# ORSA - overview

- ORSA with us for a number of years now
- Question arises as to how to keep it fresh and relevant
- Number of current/upcoming factors to be considered in 2020 and beyond:
  - COVID-19
  - Solvency II Review
  - Climate Risk
  - Brexit



# CBI 2020 Insurance Industry Briefing

- Domhnall Cullinan, Director of Insurance Supervision, noted the following in relation to ORSA
  - “...the ORSA has **not been fully embedded within decision making and planning processes**, and there has been **little evidence of engagement at board level**”
  - “...stress and scenario testing should be enhanced. The COVID-19 crisis has reinforced our view that the ORSA should consider a **wide range of stresses, of different stresses occurring concurrently**, and include their **impact on solvency and liquidity**. Analysis should consider risks arising from **combinations of stresses not previously experienced and with a low likelihood of occurrence**. These might **cover group dependencies** – such as intra-group reinsurance, lending and parental....”
  - “Recovery plans should build on and be integrated into the existing risk management framework, particularly the ORSA and risk appetite statements.”

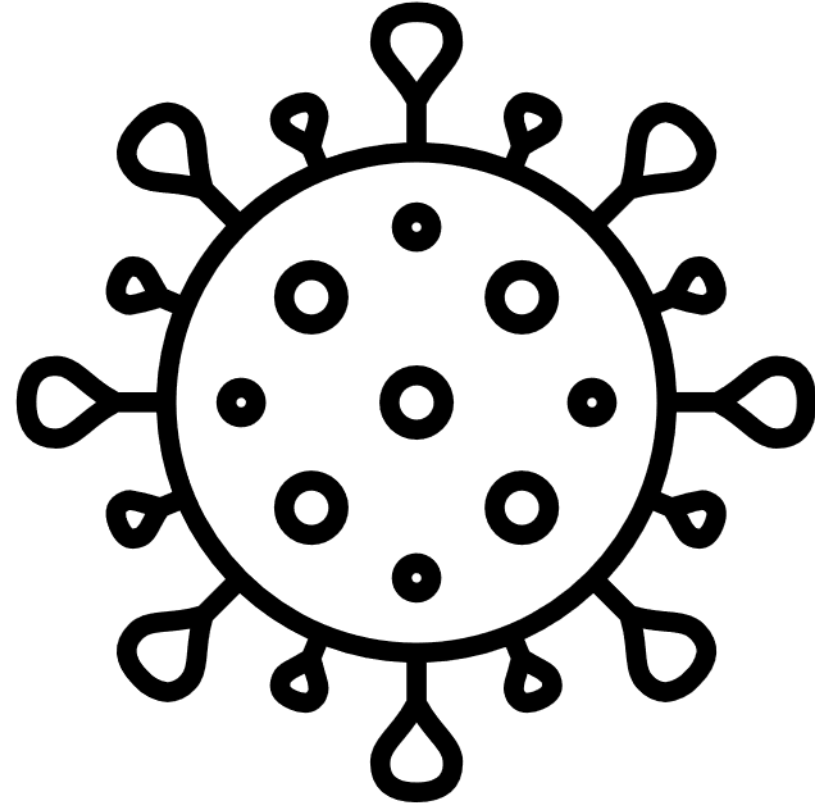
# COVID-19 - CBI Newsletter

- Consider impact and different possible stresses and scenarios including combinations not previously explored
- Stronger processes show firms subjecting material group links to robust risk management and stress testing
- Where firms face potential claims which are subject to a range of possible outcomes (e.g. BI claims under litigation) consider worst-case scenarios
- Consider liquidity risk exposures and contingency plans in stressed situations
- Consider if scenarios considered in last ORSA are no longer adequate, or if there has been a change in risk profile to the extent that results of a new ORSA would materially affect the decision making of the board



# COVID-19 Considerations in the ORSA

- In preparing forward-looking projections, firms will need to consider the impact of COVID-19
- Base case will need to consider best estimate of future experience
- Stresses will need to allow for uncertainty in most material assumptions, ideally on a combined basis (multi-factor stresses)
- May also need to allow for uncertainty in relation to timing



# COVID-19 – Assumptions



# COVID-19 – Market Impacts

Equities

Property

Interest Rates

Credit Spreads

Credit Ratings (and associated Counterparty Default)

Inflation

# COVID-19 – Other Impacts

- Impact on new business volumes?
- Impact on product design?
- Impact on business model?
- Impact on reinsurance arrangements?
- Increased operational risk?

# COVID-19 and Dividends

- CBI COVID-19 – Regulated Firms FAQ
- *“....we consider that **insurance firms should postpone any payment of dividend distributions or similar transactions until they can forecast their costs and future revenues with a greater degree of certainty.** Where the board of an insurance firm forms the view that a high level of certainty has been reached and wishes to make a distribution, **the Bank expects the firm to engage with their supervision team before proceeding with the distribution, demonstrating satisfactory forward looking solvency, liquidity and operational resilience positions in light of the current environment.**”*
- Therefore, ORSA will be important source of evidence to support planned dividends.
- Should ORSA show dividends in 2020 if engagement with CBI has not started?

# Other ORSA Considerations - Solvency II Review

- Impact assessments considered impact of potential changes already flagged in consultations:
  - Yield Curve
  - VA
  - SCR
- But also risk margin

$$RM_{scenario} = CoC \cdot \sum_{t \geq 0} \frac{SCR(t) \times \max(\lambda^t, 0.5)}{(1+r(t+1))^{t+1}}, \text{ where } \lambda = 0.975$$

- Deadline for EIOPA advice extended to end December 2020
- Should companies consider impact of changes in solvency position when looking forward a number of years?



EIOPA-BoS-20/107  
2 March 2020

**Technical specification of the information request on the  
2020 review of Solvency II  
Holistic impact assessment**

Version 1.1 (updated on 18 March 2020):

- Deadline for participants extended to 1 June (originally 31 March)
- New footnotes 14 and 15 on page 27 for clarification on the segments listed in the MCR section



# Other ORSA Considerations – Climate Risk

- CBI's September 2019 Insurance Newsletter
  - *“We expect Irish insurance undertakings to ensure that they give appropriate consideration to assessment of climate related risks and adopt a longer-term perspective than typical business planning and strategy setting processes. Risk management frameworks, and the ORSA in particular, should reflect these considerations.”*
- Also recent EIOPA consultation on the supervision of the use of climate change scenarios in ORSA
  - <https://www.eiopa.europa.eu/content/eiopa-consults-supervision-use-climate-change-scenarios-orsa>
  - *“Supervisors should expect insurers to subject material climate change risks to at least two long-term climate scenarios, where appropriate...”*

# Other ORSA Considerations – Brexit

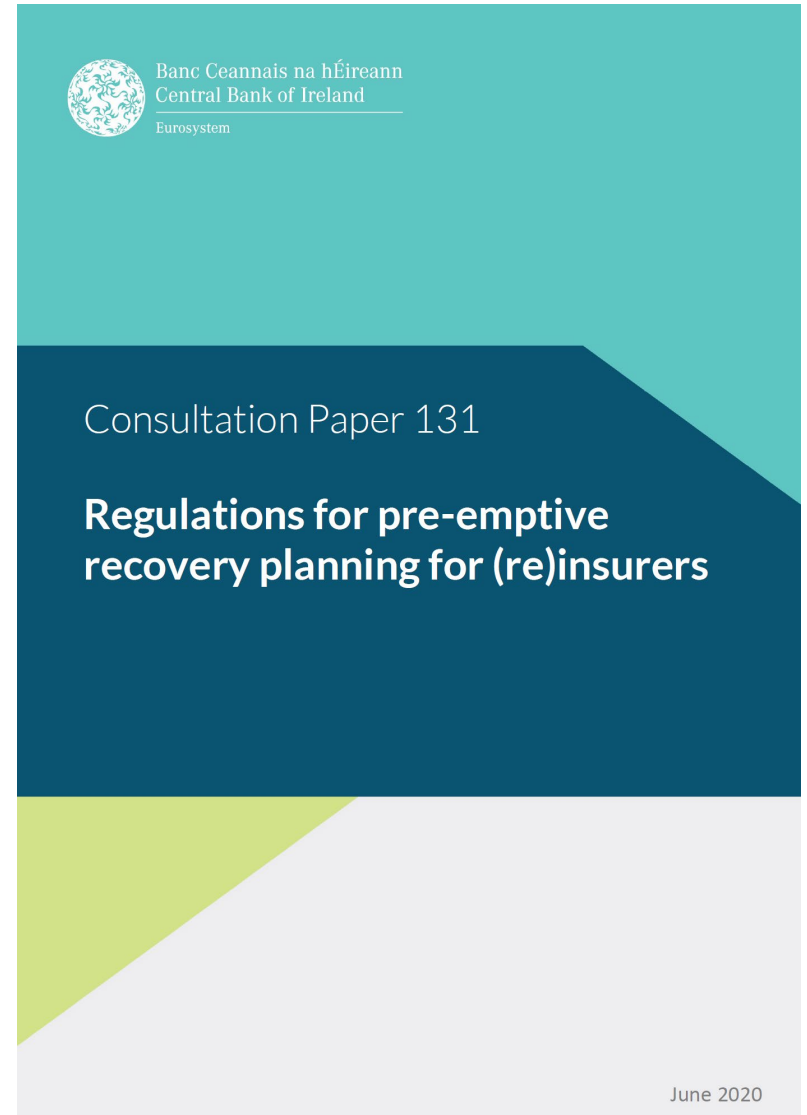
- Transition period ends on 31 December 2020
  - Still a lack of clarity on trade agreements etc.
  - Most firms clear of implications for insurers selling into/from UK
  - What about agreements with UK providers?
- Question over UK Solvency II equivalence in long-term
  - UK has begun a review of Solvency II
  - Solvency II review ongoing
  - Reinsurance and group reporting impacts



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# Other ORSA Considerations - CBI Consultation Paper on Recovery Planning – CP131

- CBI acknowledges that there is a link between recovery plans and ORSA
- CP envisages scenario analysis covering a range of scenarios and assessment of recovery options
- Capital indicators should be aligned with the ORSA and medium-term capital management plan.



# Recommended Reading

## Milliman COVID-19 ORSA Guide:

<https://www.milliman.com/-/media/milliman/pdfs/articles/covid-19-orsa-guide.ashx>

MILLIMAN WHITE PAPER

### COVID-19 ORSA guide

Understanding risk within the 'new normal'

Ian Penfold  
Sophie Smyth, FIA, CERA  
George Barrett, FIA



COVID-19 has transformed the risk landscape for insurance companies. In this paper, we discuss how insurers can explore their future exposures to the novel coronavirus through their ORSA.

#### The ORSA and COVID-19

After severe economic contractions in the first half of 2020, many economies will be plunged into a deep recession as the impacts of business closures and reduced demand affect GDP figures. The economic impacts, as well as the epidemiological aspects of the COVID-19 pandemic, will reshape the outlook for the insurance industry over the next three to five years. Insurance companies will continue to be affected in a wide variety of unprecedented ways, and their exposure to risks will have been significantly different to those accounted for in their original 2020 business plans.

Insurance companies are being forced to adapt their overall operating models, incorporating the impacts of the virus to continue to achieve their strategic objectives and goals. These impacts are not only limited to pure insurance risks such as underwriting and claims reserving, or to the market-related impacts on companies' balance sheets, as there are additional new or elevated operational risks to consider, such as a greater cyber threat linked to employees adapting to a new working environment.

The Own Risk and Solvency Assessment (ORSA) process provides the framework for insurance companies to understand, evaluate, and quantify their risk profile. It is inevitable that the ORSA will form a major part of the backdrop to work in 2020 and likely further into the future. Many companies which planned to deliver their ORSAs to the board toward the end of the year will have to perform an early out-of-cycle ORSA. Firms will need to consider how their risk monitoring and reporting should adapt to the new risk profile.

A central component of the ORSA process is forward-looking stress and scenario tests, and these tests will undoubtedly need to make assumptions around the impacts of COVID-19.

#### COVID-19 within business planning

The baseline for the ORSA stress and scenario testing is the three- to five-year forecast of expected financial performance and solvency. For most insurers, this will require an extensive exercise to recalibrate business plans to adjust for changes in consumer demand, market conditions, claims experience, and many other factors. There are a number of assumptions which are currently unknown, so judgement will need to be made, such as:

- Will effective treatments or vaccines become available? If so, when? Until such a time, how will public health policies such as social distancing affect business plans?
- How long will the pandemic last in particular geographical areas? To what extent will the virus re-emerge over time?
- How long before economic volatility returns to 'normal'?
- How many additional deaths will the virus ultimately cause?
- What will be the impacts on the demand and affordability of insurance products? Which products will experience greater/reduced demand once the initial peak of the virus has subsided?
- What will be the impacts on claims experience?

Companies will be required, even if indirectly, to take a best-estimate view of these questions when outlining their central business forecast. Yet most, if not all, of these areas are still subject to considerable uncertainty. Stress testing allows firms to explore the potential for reality to play out differently from the central assumptions with a focus on alternative conditions that could be particularly adverse for the company and its stakeholders.

In the rest of this paper, we offer a framework of how insurers can go about understanding the uncertainty in their business plans, the key risks to their strategy in order to achieve their goals, and expectations of solvency.

# For more information:

<https://ie.milliman.com/en-gb/risk/orsa>

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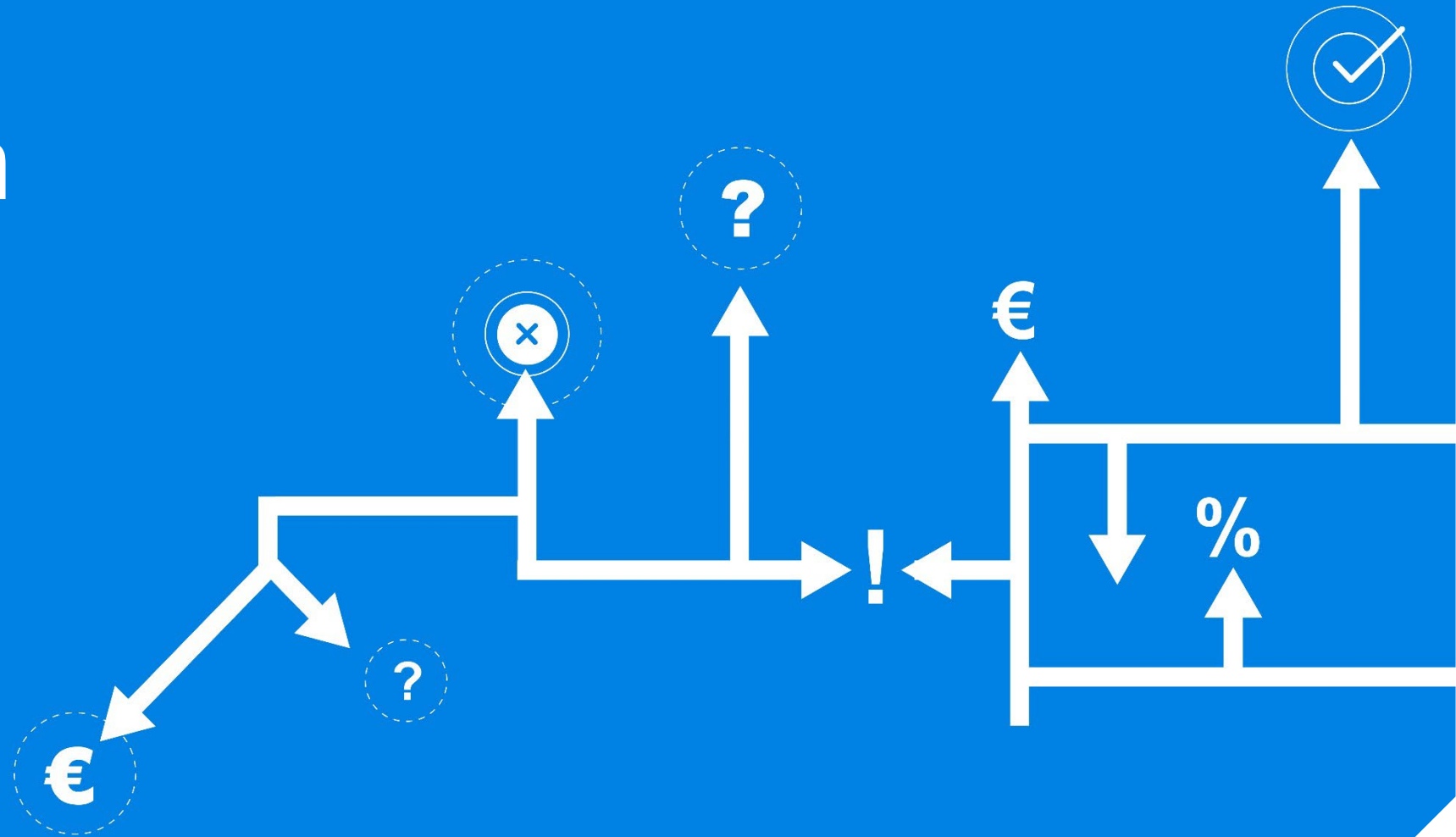
# Effective Key Risk Indicators

Eamonn Phelan

18 NOVEMBER 2020



# KRI Design

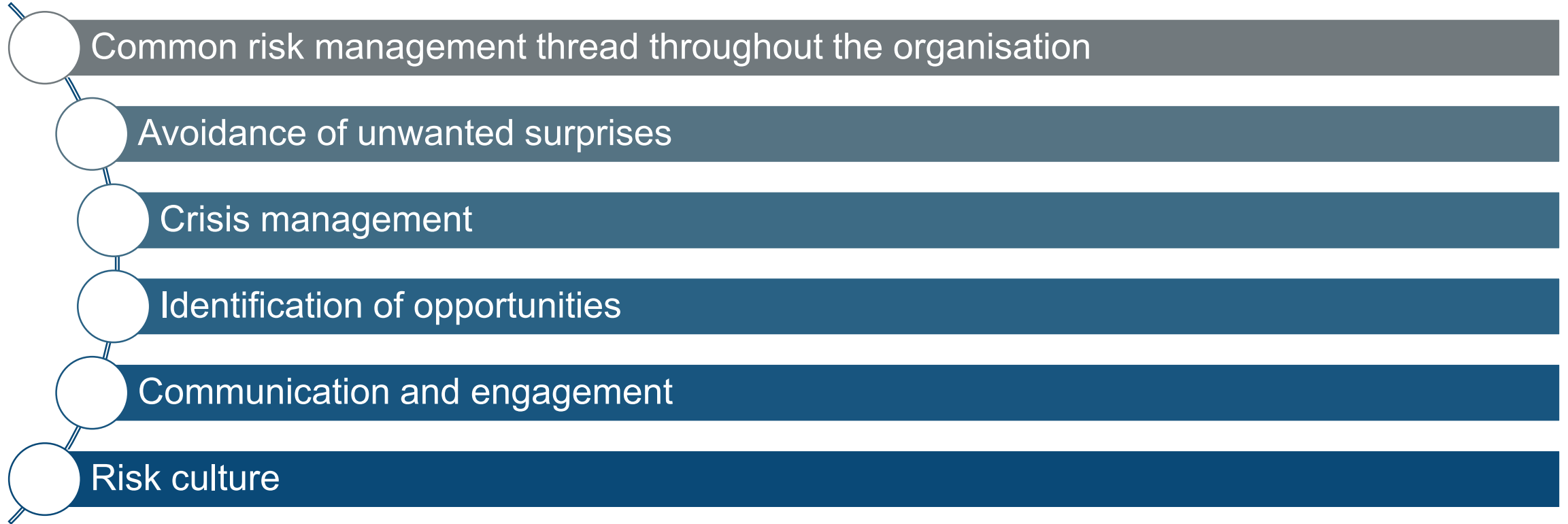


“An early warning monitoring may tell you the likelihood of a risk materializing is increasing, and further caution should be applied to avoid being hampered...**other monitoring may show that the risk is less likely to materialize, and may allow you to take more risks at this particular point in time**”

- Hans Læssøe (“Prepare to Dare”)



# KRI value proposition



**Health Warning!**



Don't let your KRIs become KPIs!

# So, what does “good” look like?

Integrated and  
coherent framework

Forward-looking

Dynamic

Common  
understanding

Buy-in from key  
stakeholders

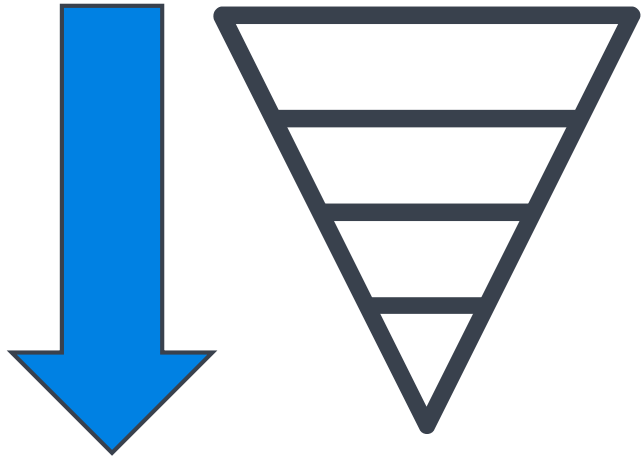
Monitoring the right  
exposures

Informed

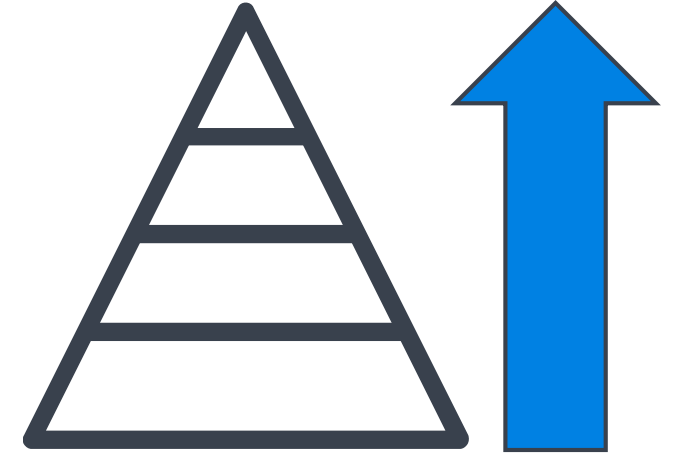
Automated

# Top Down or Bottom-up?

What we want to achieve

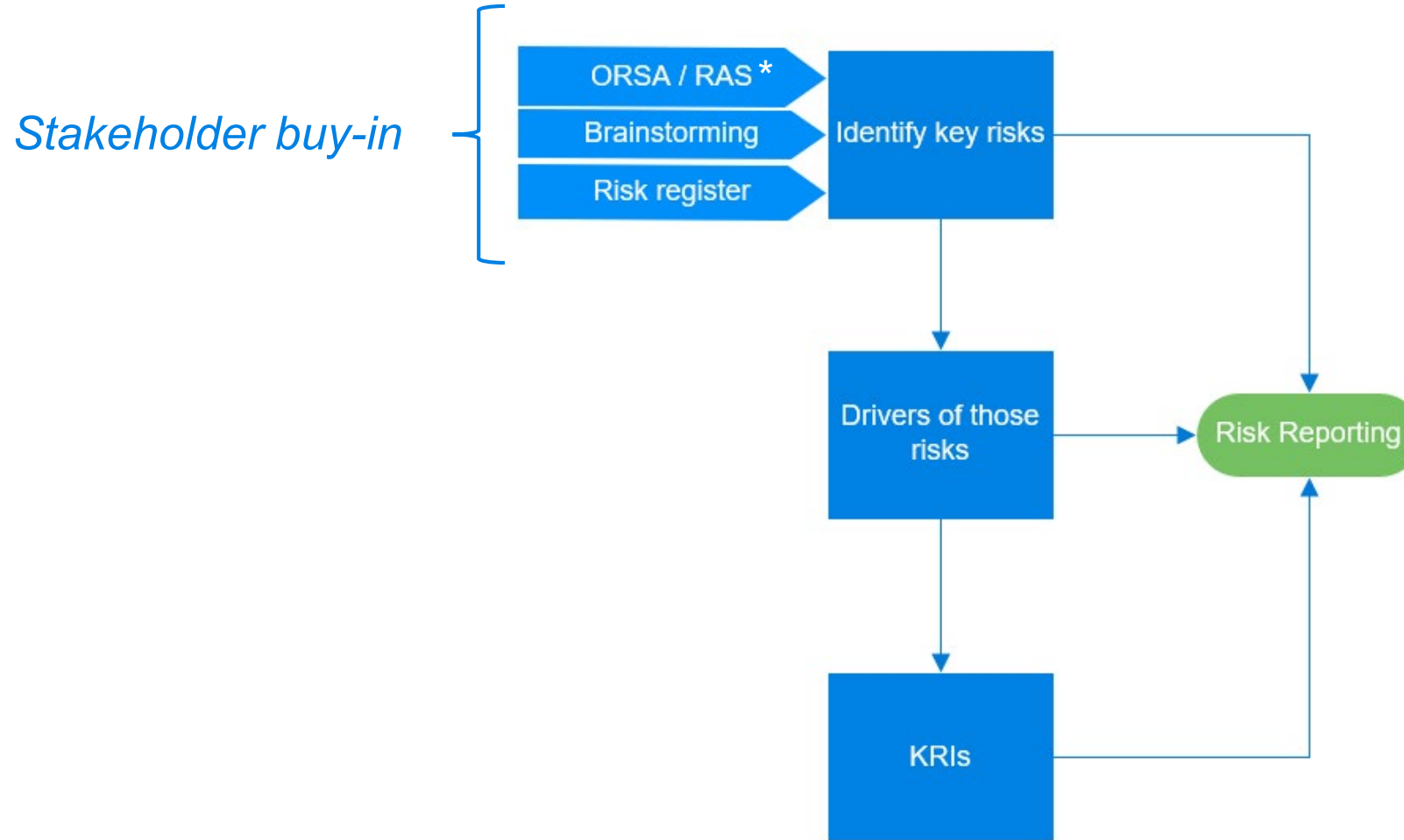


- Emphasis on key risks & opportunities
- Identify key underlying risk drivers
- Avoid anchoring bias
- Reflect current risk profile
- Create coherent framework



# Top-down design process

## Overview

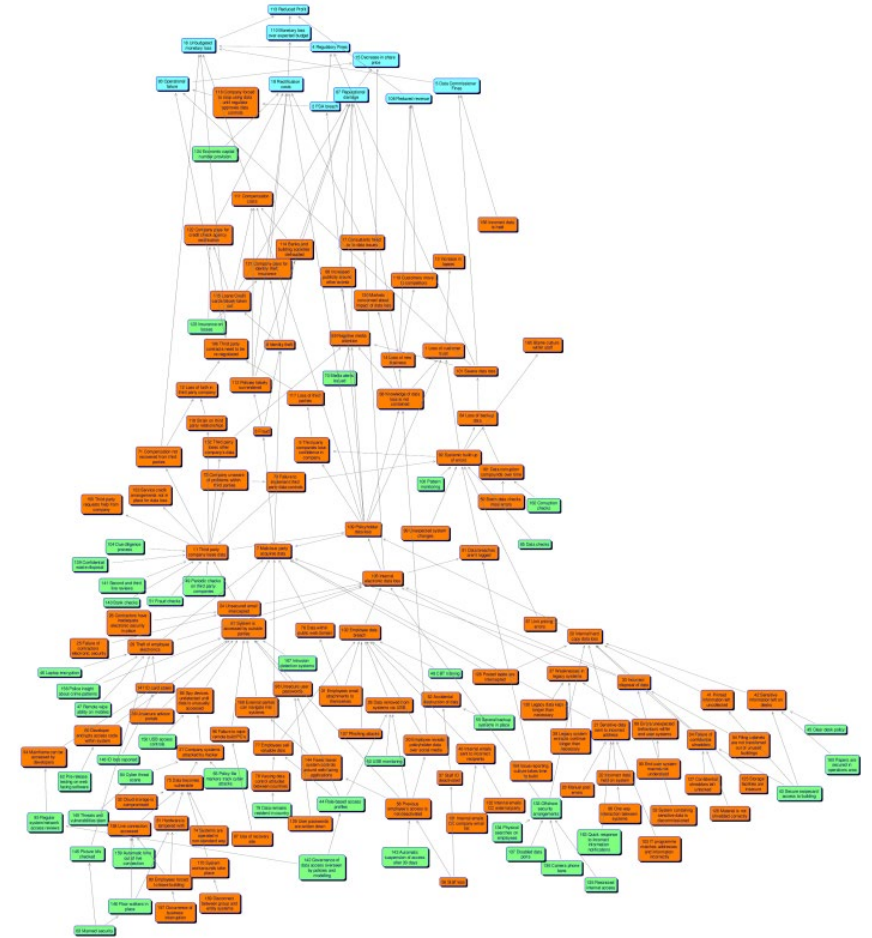


\* Risk Appetite Statement (“RAS”)

# Understanding the risks

## Causal mapping

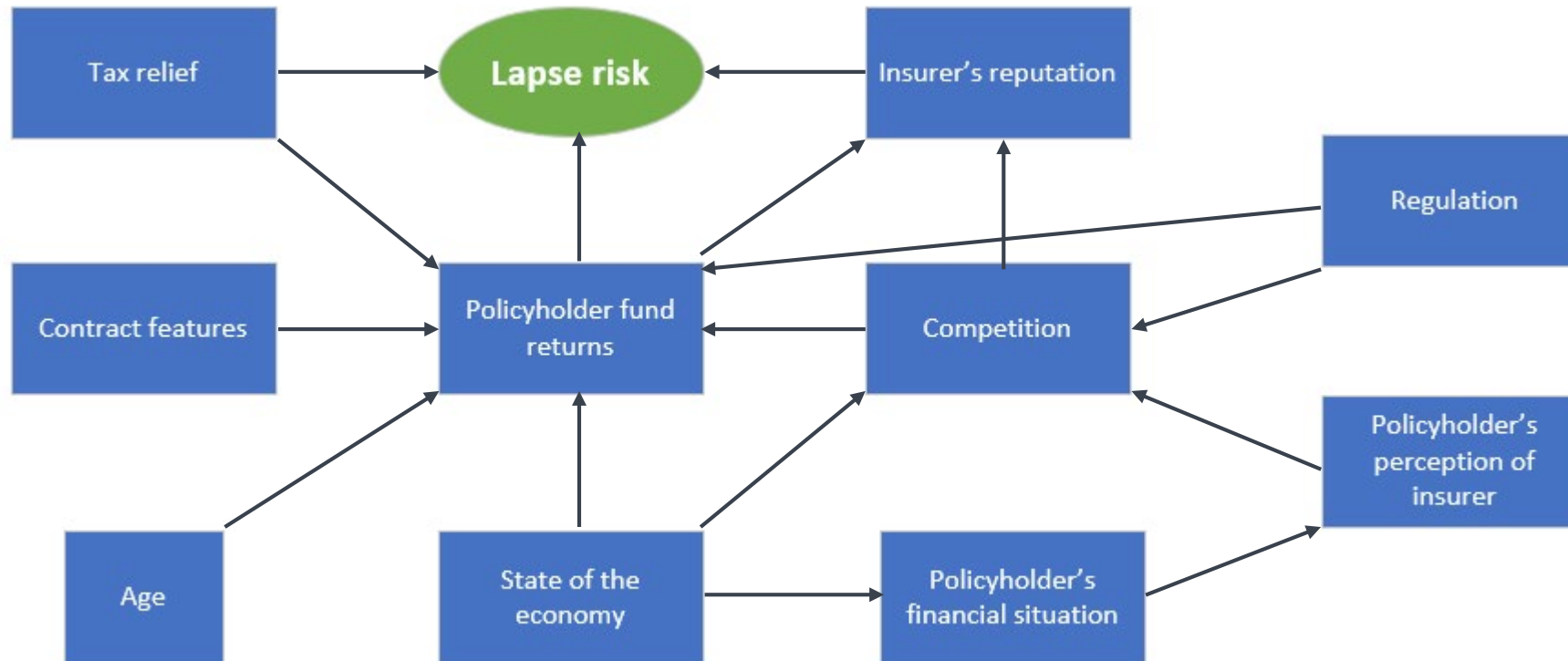
- Drivers of risk can be identified by a process called **causal mapping**
- It can show how various risk drivers, for the same or different risks, are **interconnected**
- It allows us to move from looking at a risk as a single thread to looking at risks as **interacting parts**
- Causal mapping also ties back to the brainstorming process used in risk identification
- It involves **experts** from key risk areas to identify the drivers of those risks



# Understanding the risks

Example – drill down into lapse risk

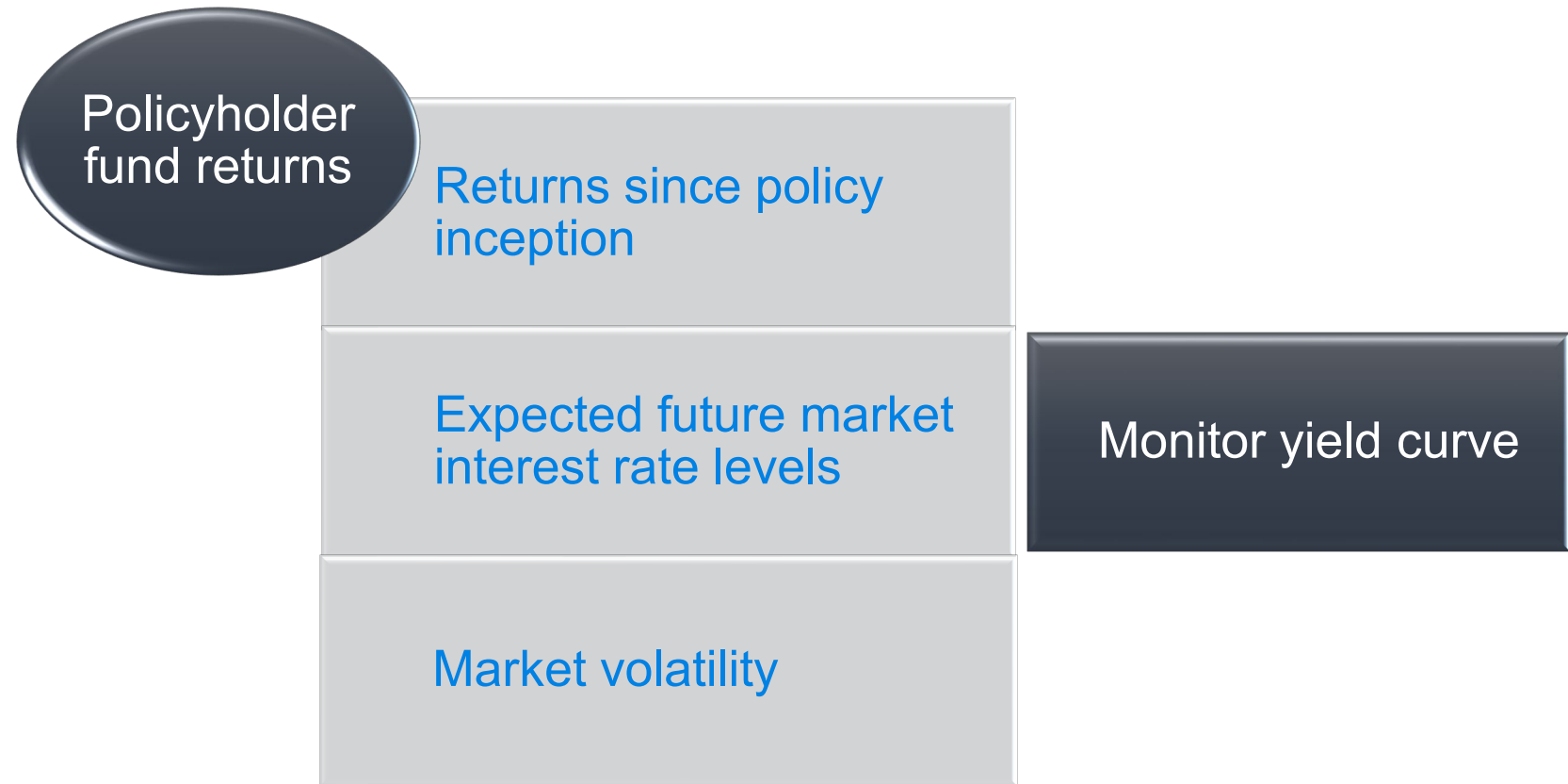
- **Causal drivers** associated with lapse risk:



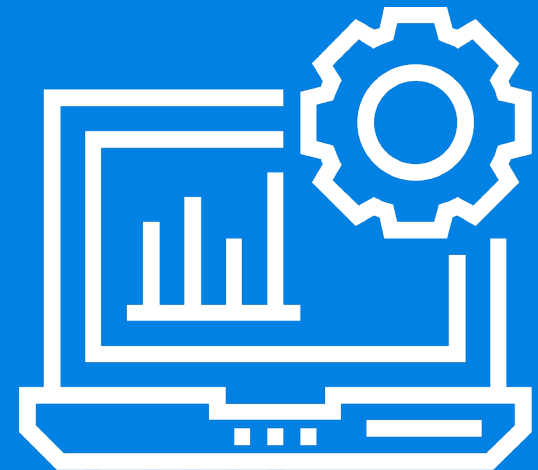
# Understanding the risks

Specific features of expected fund returns

- Policyholder fund returns is **one** of the most important causal drivers
- Identify a suitable **forward-looking** indicator

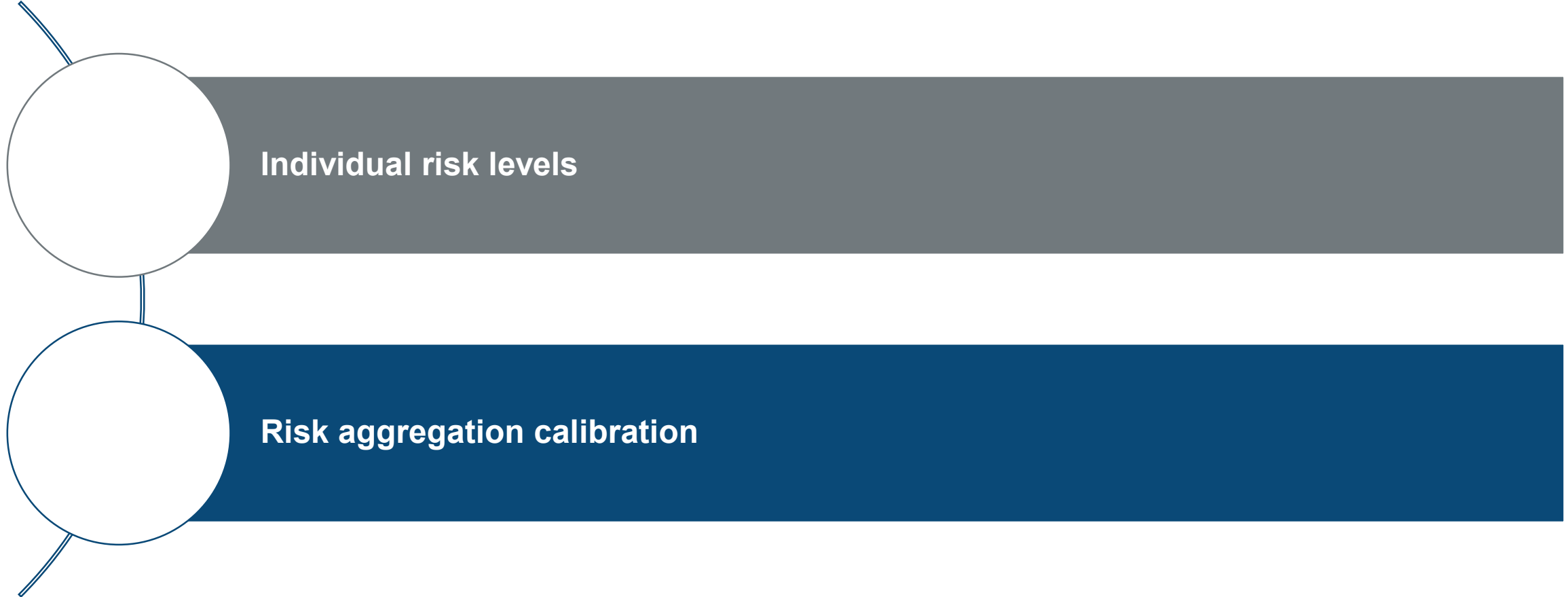


# KRIs: Calibration of risk levels





# Calibration of risk levels



# Individual risk levels

## RAYG system

- A red/amber/yellow/green (**RAYG**) system can be used to calibrate the risk limits of the KRIs. This system acts as an approach to distinguish the status of KRIs.



- Setting limits should involve consideration of:
  - ✓ Triggering timely action
  - ✓ Upwards escalation

# Individual risk levels

## Quantitative measure

- The calibrated thresholds could be of a quantitative measure, where warnings for further action are triggered if **metrics** fall either side of a certain **numerical** level.

For example, numerical triggers for **reputational risk**, could be:

Number of negative coverage events during quarter	Red: > 2
	Amber: 2
	Yellow: 1
	Green: 0

# Individual risk levels

Qualitative measure

- Classification of these triggers **may not be as clear** if they are qualitative.
- Calibrating threshold points in this way is more open to **interpretation**.

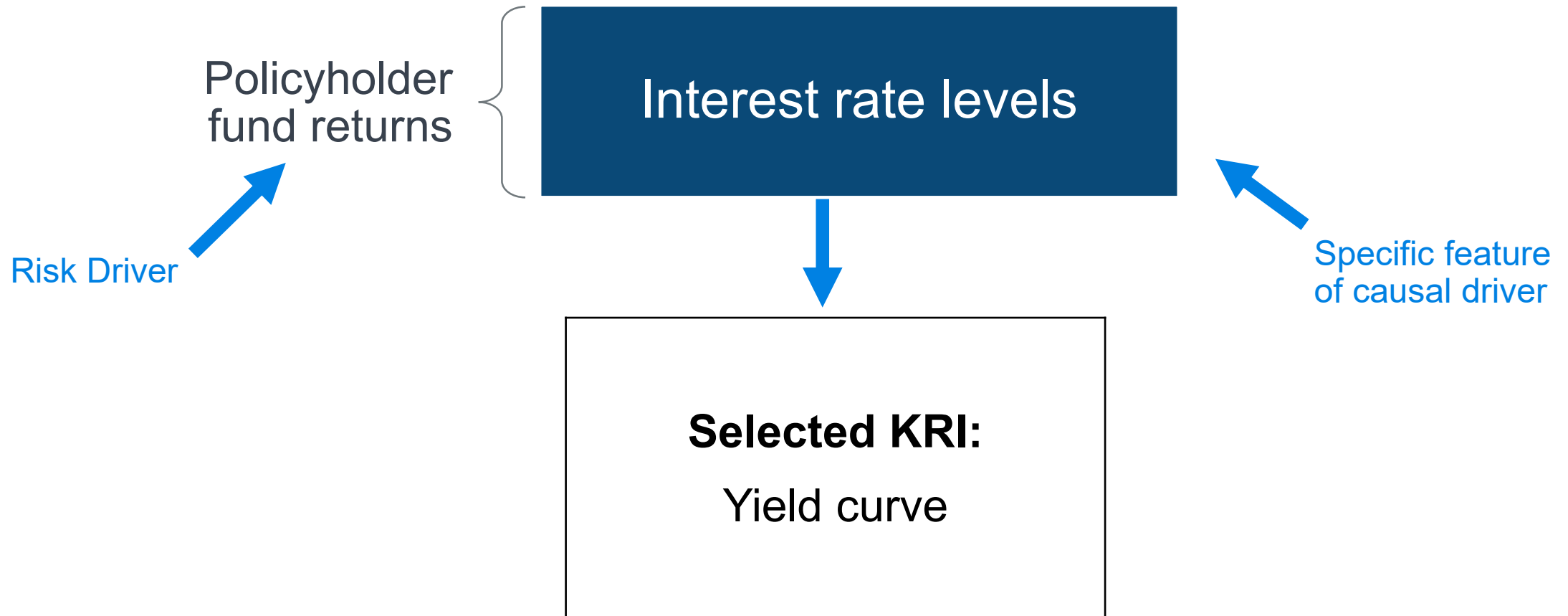
For example, defining the **status of a high loss event** based on potential loss.

Occurrence of high loss event (in line with internal materiality limits)	Red: Event escalated
	Amber: Event identified
	Yellow: Potential event
	Green: No event

# Individual risk levels

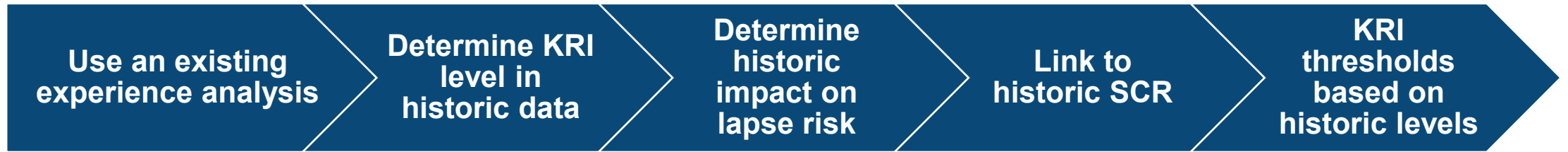
## Lapse Risk

- In earlier example, the **design process** identified the policyholder fund returns as a **driver** of lapse risk:



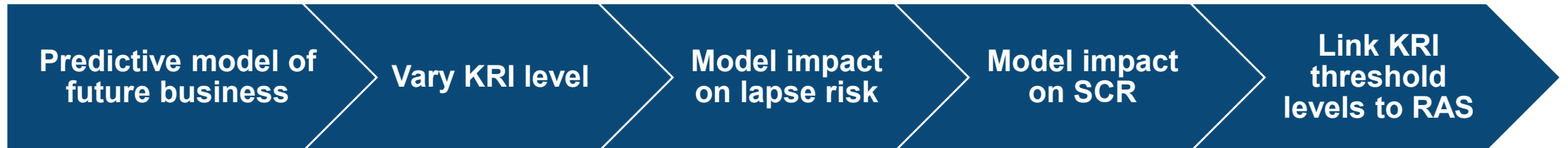
# Individual risk levels

Retrospective & prospective approaches



KRI (historic level)

SCR (historic level)



KRI (model input)

SCR (model output)

# Individual risk levels

A single KRI for multiple risks

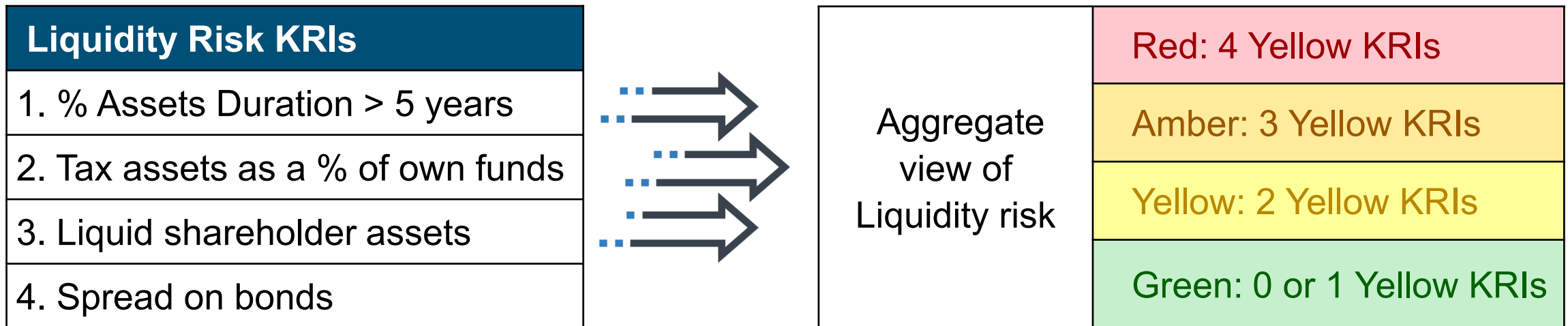
- The KRI design discussed earlier may lead to **the same KRI** being selected to **monitor various risks**.
- If this is the case, the calibration stage will need to consider selecting **consistent** risk levels to inform each of the different risks used.
- For the previous example, a yield curve based KRI was selected to monitor lapse risk.
- The same yield curve based KRI could then also inform:
  - **Market risk** – for the Company’s own investments
  - **New business risk** – if low interest rates deter new business and impact planned volumes
- May need to be **combined** with other KRIs for each specific purpose
  - e.g. combine with interest/equity volatility when looking at market risk



# Risk aggregation calibration

## Liquidity Risk Example

- Grouping KRIs by **risk type or category** can help develop an aggregated trigger warning.
- This involves capturing the status of several related KRIs in a single combined metric. A higher-level view of the main risk categories could have linked calibrated triggers using a similar system to individual risks.





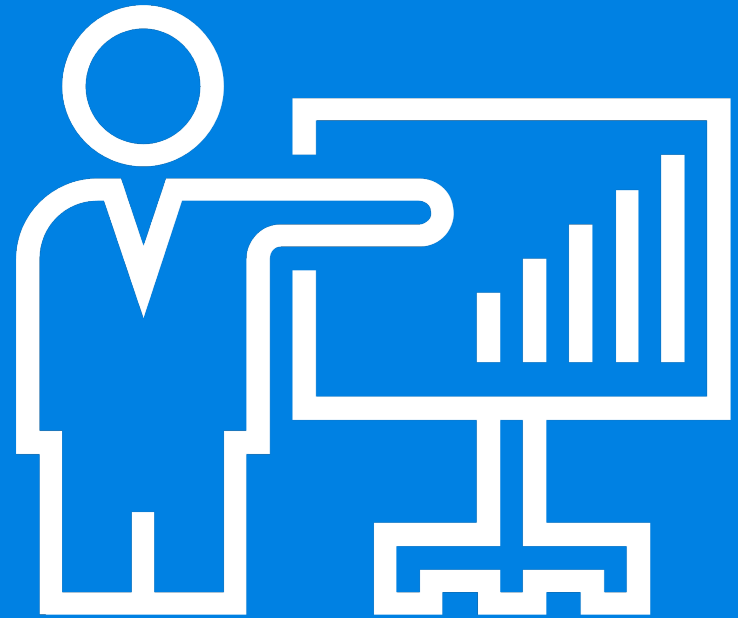
# Risk aggregation calibration

## By Time Period

- A similar approach can be used to calibrate KRIs when aggregating by **time period**, rather than risk group.
- This involves capturing the status of several related KRIs in a single combined metric. A higher-level view of the main risk categories could have linked calibrated triggers using a similar system to individual risks.

Aggregate view of risks with short-term time horizons	Red: > 7 Yellow KRIs
	Amber: 3 – 6 Yellow KRIs
	Yellow: 2 or 3 Yellow KRIs
	Green: < 2 Amber KRIs

# KRI Reporting



# KRI Dashboard Report

Risk Category	KRI	Jun-20	Sep-20
Category 1	Example 1	90%	84%
	Example 2	7	4
	Example 3	0	0
Category 2	Example 4	130	150
	Example 5	210	...
Category 3	Example 6	...	...
...	...	...	...

# Reporting rules-of-thumb

1

Think of your **audience** and their **needs**

2

Keep the message **simple** and **consistent**

3

Consider if an **action plan** is needed

4

Mix **visuals** with the numbers

5

**Frequent** and **automated**

# Action plan reporting

## Considerations

- There may be a need to communicate action points linked to the results. It would be beneficial to have a predetermined framework to evaluate how a company should react to changes in KRIs



What are the **pre-defined** actions for each trigger level?



Are **multiple** actions needed to address a single KRI?



Is the issue **idiosyncratic** or **systemic**?



What are the **costs** and **benefits** of proposed action(s)?



# So, what does “good” look like again?

Integrated and coherent framework



Forward-looking



Dynamic



Common understanding



Buy-in from key stakeholders



Monitoring the right exposures



Informed



Automated





# For more information:

<https://ie.milliman.com/insight/risk-insight>

**Eamonn Phelan**

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# Q&A session