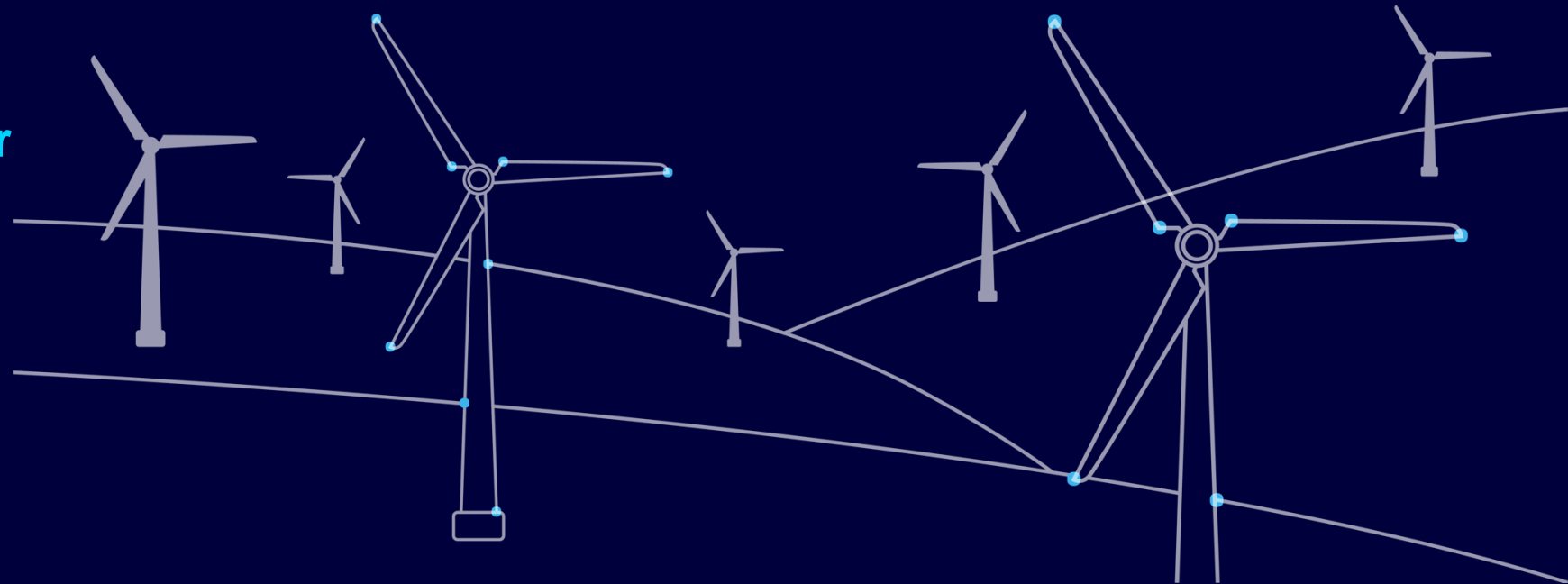




ORX Analytics & Scenario Forum 2021

Wednesday 29th September 2021

Leveraging the power of over
100 financial organisations
to energise your operational
risk management



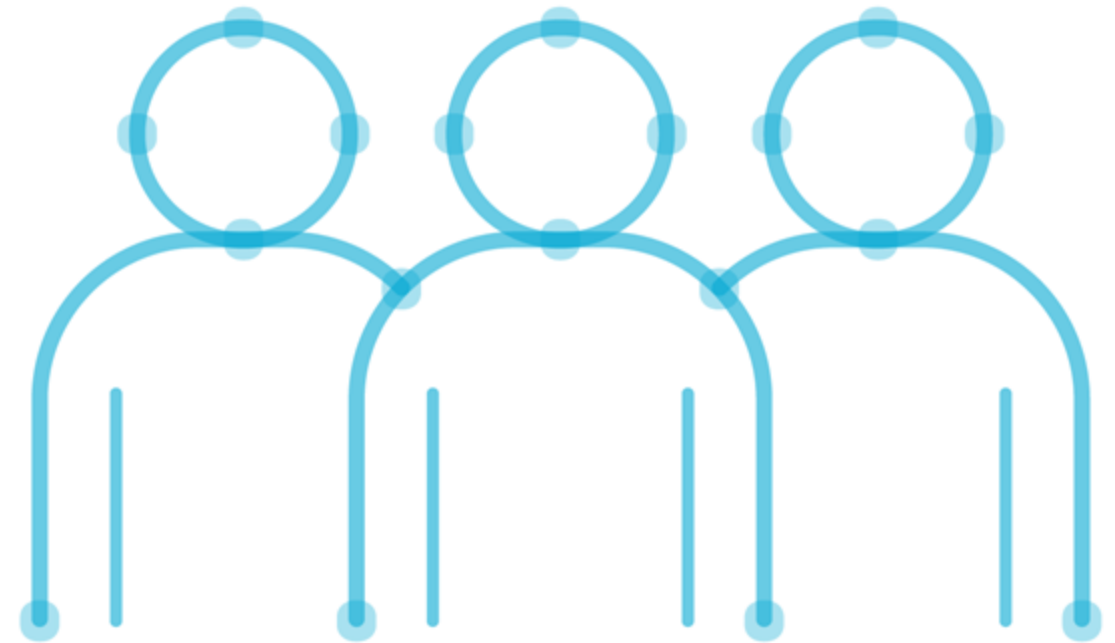
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Welcome and Introductions



Meet the ORX team



Luke Carrivick
Director of Research
and Information
ORX



Steve Bishop
Head of Risk
Management
Programmes
& Insurance
ORX



Giuseppe Aloï
Scenarios Senior
Manager
ORX

How to make the most of the virtual session



Find a quiet place to dial in from



Wear a headset for best sound



Turn on video when talking
(if the network quality allows)



Mute your mic when not speaking



Switch off from email and phones



Use “Raise Hand” button to ask a question



Use Chat function to ask a question



Email Robert.Reay-Jones@orx.org to ask questions



When dialling in, digit *6 to unmute



If you experience any technology issue,
please contact support@orx.org

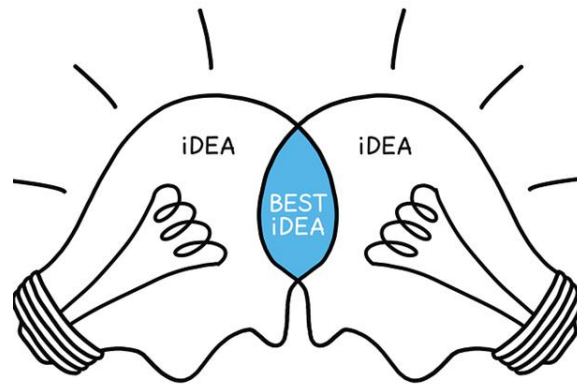
How to interact during the
forum

Format

- Topics will be discussed in panel, breakout or plenary sessions
- ORX will introduce and facilitate the sessions
- Timings are flexible
- Feel free to speak after someone else has finished, alternatively use the “raise your hand” functionality

Breathing space

- There is a 10-minute guided health and wellness session following by a short break in the agenda.



Culture

- Informal and very interactive
- Acceptance that no one has all the answers
- Share your experience and knowledge
- Ask questions & be honest
- Hopefully, we can all learn from the experience
- CHATHAM HOUSE RULES apply

**Please come prepared to share your views and perspectives.
We will be encouraging everyone to participate actively in the discussions.**



Welcome to the Analytics & Scenarios Forum

Louise Cordwell, **Lloyds Banking Group**
Chair of ORX Scenario Working Group



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Agenda and Timings – Wednesday 29th September



06:30 – 06:40	Welcome to Analytics & Scenarios Forum Day 1	<i>Louise Cordwell, LBG Steve Bishop, ORX</i>
06:40 – 07:20	The evolution of operational risk scenario programmes	<i>Giuseppe Aloï, Steve Bishop, ORX</i>
07:20 – 07:30	ORX information and activities on climate risk	<i>Luke Carrivick, ORX</i>
07:30 – 07:40	Break	
07:40 – 08:20	Climate Change: How behavioural change and economic consequences may impact operational risk	<i>Michael Grimwade, ICBC Standard</i>
08:20 – 08:45	What is the future for operational risk modelling?	<i>Luke Carrivick, ORX</i>
08:45 – 08:50	Wrap up and closing remarks	<i>Giuseppe Aloï, Steve Bishop, Luke Carrivick, ORX</i>



The evolution of operational risk scenario programmes

06:40 – 07:20



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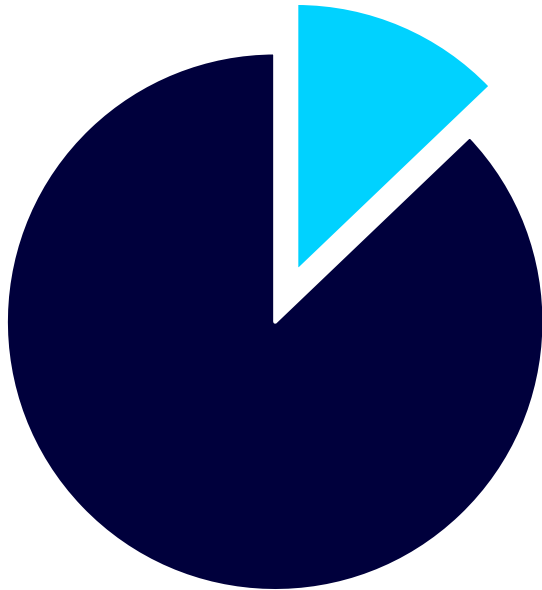
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The evolution of operational risk scenario program

In almost nine institutions out of 10, the operational risk scenario programme is aligned with other risk programmes

Source: [Scenario Practice Benchmark report 2021](#)



87% of firms participating in the study stated that they use operational risk scenarios for more than one purpose.

“While the primary use of scenario analysis remains risk measurement, the study shows that scenario outputs can provide greater value when also used for risk management purposes by increasing awareness of material risks and promoting understanding of gaps and weaknesses in controls.

In addition, firms use scenarios for a wider range of risk management purposes, such as operational resilience.”

Source: [Scenario Practice Benchmark report 2021](#)

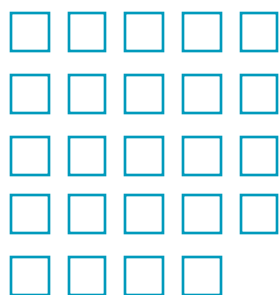
The priority for most institutions is to evolve their scenario framework, to make it more agile and efficient. It is also evident that some firms have started to pivot away from risk measurement and are beginning to use scenarios in their wider risk management framework (e.g., risk appetite, control environment test etc.).

Source: [Scenario Operational risk scenarios white paper 2021](#)

The evolution of operational risk scenario program

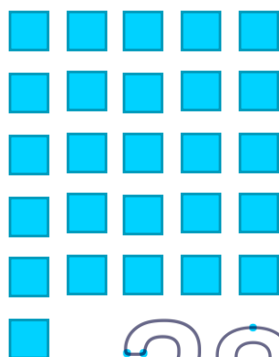
Over **two thirds** of surveyed organisations **identify risk management actions** as part of scenario assessment

Source: [Scenario Practice Benchmark report 2021](#)



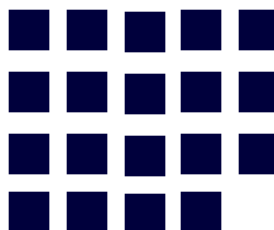
35%

The scope of the scenario assessment covers direct impacts only (e.g., customer compensation, legal costs)



38%

The scope of the scenario assessment covers direct and indirect impacts such as customers' and shareholders' sentiment and some **risk management actions are identified**

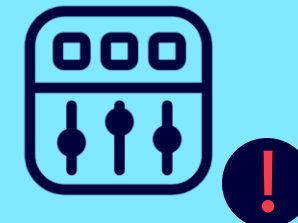


27%

The scope of the scenario assessment identifies all impacts (direct and indirect) and includes the development of risk **management response plans** (playbooks) and/or uplift actions to **enhance the control environment**.

Take-aways from the EMEA and NA ORX Analytics and Scenario forum

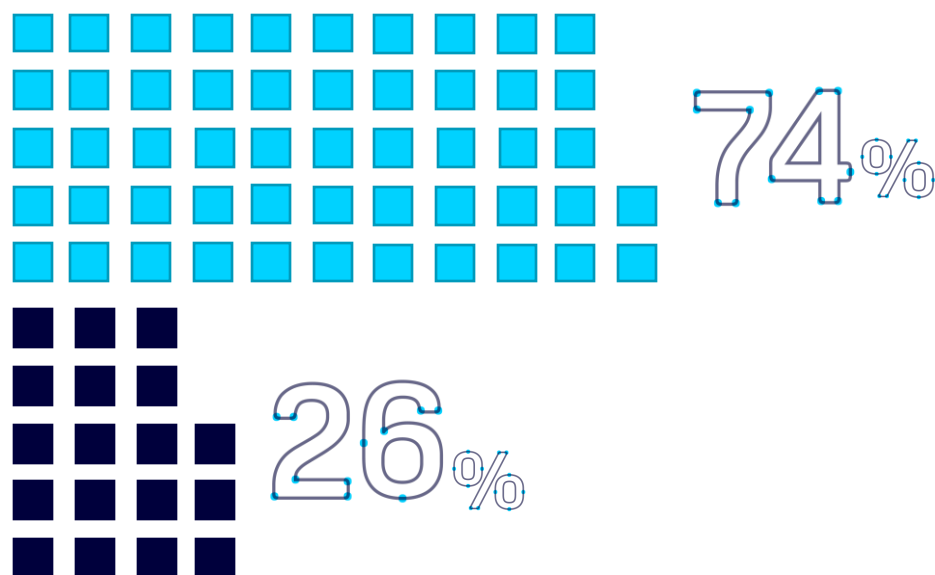
1. Most firms shared the same scenario analysis “journey”: from regulatory exercise to risk management tool
2. Reflecting the control landscape into the scenario development process is key to make scenario more realistic and add value to risk management
3. Organisations recognise the importance of establishing the synergies with the resilience function, as it gives a more holistic view of the impacts on the business services



The evolution of operational risk scenario program

O.R.X

The use of triggers is effectively implemented in over one quarter of institutions surveyed

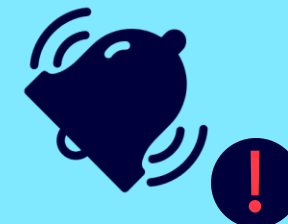


Source: [Scenario Practice Benchmark report 2021](#)

Open points from the EMEA and NA ORX Analytics and Scenario forum

Most financial institutions have established some metrics to support the scenario ID process, although:

1. Very few financial institutions received a feedback from their regulators regarding the use of triggers
2. Only a handful of organisations have identified a trigger owner
3. Defining trigger metrics may be cumbersome for some risks (e.g., internal risk control, loss event and external triggers)



The evolution of operational risk scenario program

Firms are expanding the use of scenarios beyond risk measurement:



Themes for discussion

- Does your firm use scenarios for more than one purpose? If so, what are these other purposes/programmes?
- Do you use your scenario framework/methodology for other purposes OR do you leverage results from your operational risk scenario programme in multiple risk exercises?
- How do you include controls into your scenario development process?
- How are risk management actions followed up once they are identified in scenario workshops?
- Do you use triggers in your scenario process?

The evolution of operational risk scenario program

O.R.X

ORX's 2017 study on industry practices and developments in control frameworks highlighted internal and regulatory pressure to enhance controls and control management, with a need over time to develop common terminology and practices.

The acceleration of digitalisation in the financial services sphere has resulted in additional challenges, requiring further enhancement of control practices.

Partnering with [McKinsey&Co](#), we aim to create an **ORX Reference Control Library**.

This will be developed using a similar member data-driven method to the ORX Reference Taxonomy. Data will be used to determine a common industry view of controls.

The outputs should allow members to benchmark controls, help develop your thinking and practice, and potentially even integrate the results into your own framework and systems.



Phase 1:

Data collection and analysis

Jun-Aug 2021



Phase 2:

Review with Member advisory panel
& Roundtables

Sep – Oct 2021



Phase 3:

Control library and practice report

Nov – Jan 2022



ORX information and activities on climate risk

07:20 – 07:30

*Luke Carrivick, **ORX***



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Discussion Groups

- During the first half of 2020, we held a series of regional calls to discuss the impact of climate change on operational risk [link](#).
- We facilitated conversations with ORX members based in [Canada](#), [South Africa](#), [Australia](#), and the [UK](#).
- These sessions provided a platform to share views on the impact of climate change on operational risk and to identify common challenges and potential solutions.

Information

Some climate information exists across our Data, ORX News, Scenarios Library and Horizon scanning – but this is limited.

Future focus

- Support climate risk within the context of specific regulatory requirements (e.g., ECB 2022)
- Expand the scope of ORX News to include relevant events
- Consider any definitional work with the DWG

Climate change discussion group

Members can find more information on the [ORX website](#).



Discussion groups - The Risks

- Globally - high levels of alignment on the scope of the problem and the risks
- Very familiar set of Physical and Transition Risks (model risk is more unusual)
- Challenge here is the different rates at which the risk profiles are changing, and the timeframe over which events will manifest

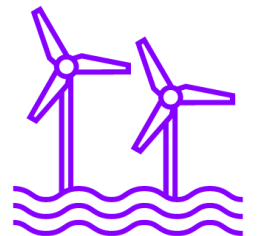
Physical

- Assets: Events resulting in increased damage to physical assets, buildings and other premises.
- Supply chain and external infrastructure: Events causing disruption to the supply chain and external infrastructure failure
- Internal Infrastructure: Infrastructure and IT failure



Transition

- Conduct and legal: Greenwashing, blue-lining, litigation
- Compliance: Increase in policy and regulation, changes in technological standards.
- Reputational: Changes in customer and stakeholder behaviour and expectations.
- *Model Risk: Suitability of current models*



Discussion groups - Key observations and challenges

O.R.X

Drivers

- Climate is a top concern
- Focus on regulatory requirements and developments
- Other stakeholder pressures

Approach

- Integrate climate change management across risk types
- Often specific working group or team

Measurement

- Scenario analysis
- Look to use other data (e.g. KRI) where possible

Time horizon

- Longer term horizon than other operational risks
- Significant variation in timeline by risk
- Is climate a cause or a risk – the scope of quantification?

Regulators

- Lack of guidance in some jurisdictions
- Hard to show you comply

Data

- Climate data is lacking and not granular enough – can be hard to differentiate change from natural variation
- Lack of historical event data, and challenge to identify the OR element of losses

Horizon Scanning - Climate as a top risk

- Climate risk was ranked 3rd in our [2021 emerging risk survey](#).
- Climate risk is viewed as a transversal risk that cuts across all areas of enterprise risk management.
- Poses a growing concern to the industry and continues to be monitored as an emerging risk – difficult to assess and yet to materialise.
- One of the big challenges around quantification is the variety of impacts, and the interdependency with other risks and external drivers.

	Transition risks	Physical risks
Risk types	<ul style="list-style-type: none"> Risks arising from actions taken to mitigate climate risk as the global economy transitions towards a low carbon future 	<ul style="list-style-type: none"> Risks arising from physical disruption, e.g. disruptive weather events and natural disaster
Primary impact dimensions	<ul style="list-style-type: none"> Reputational (but cuts across all) 	<ul style="list-style-type: none"> Operational and financial
Key emerging risk factors	<ul style="list-style-type: none"> Changing public sentiment Growing public and media scrutiny 	<ul style="list-style-type: none"> Operational resilience (including third party operational resilience) Physical security and safety and third party physical security and safety
Main risk theme interdependencies	<ul style="list-style-type: none"> Geopolitical risk Macroeconomic risk Regulatory change Model risk 	<ul style="list-style-type: none"> Systemic risk Third party arrangements Business continuity People risk
High degree of uncertainty and difficult to assess – emerging risk		

Where does ORX have Information on climate

Theme	Risk	ORX News	ORX Scenario Library	2021 Horizon
Physical	Assets	✓	✓	✓
	Supplier			✓
Transition	Macro-economic / strategic		✓	✓
	Regulatory / Compliance	Covered in media but no losses reported	✓	✓
	Reputational	✓		✓
	Conduct / Legal	✓		✓
Other	Model / Pricing			✓

- We tend to mirror the industry – so limited data is available
- Risks are articulated in horizon scanning surveys, but few examples (even within the scenario library)
- Plans to expand the scope of ORX News to include severe weather events, and infrastructure failures outside of financial services
- Some information relevant to transition risk are not events, so are not currently captured, e.g.:
 - ✓ Firms exiting carbon-intensive investment [BNP Paribas](#)
 - ✓ Move to invest more in projects that fight climate change [Goldman Sachs](#)
 - ✓ Some moves towards carbon divestment [Legal and General](#)
 - ✓ Reputational impact, activist pressure [Blackrock](#)

Example from ORX News

- Some examples of ORX News stories are presented based on Scenario Category = “Adverse Weather Events”

Story Reference Number	Headline	Country	Business line	Date first in media
8076	Floods damage up to IQD 12 billion of banknotes in Rafidain Bank vault	Iraq	Corporate Items	13-Nov-18
6908	Heavy flooding destroys 280 deposit boxes at Sparkasse Hildesheim Goslar Peine	Germany	Retail Banking	11-Aug-17
5901	ME Bank and others face ATM and card transaction problems after storms cause cloud server outage	Australia	Card Services	06-Jun-16
5731	Cyclone Winston causes Fiji Development Bank to lose FJD 5.4 million	Fiji	Commercial Banking	09-Mar-16
4495	Citibank and other banks see operations hit hard by Hurricane Sandy	United States	Corporate Items	30-Oct-12
2139	Capsugel settles insurance dispute with Allianz over USD 100 million Thailand flooding claim	United States	Liability	01-Mar-13
4163	AIG unit Lexington Insurance pays USD 1.6 million for failing to cover customer's Hurricane Sandy damage	United States	Liability	19-Sep-14
3869	DTCC attempts to recover 1.3 million physical bond and stock certificates	United States	Securities Clearing	14-Nov-12



Short break
See you in 10 minutes!

07:30 – 07:40

If you need to, please remember to complete the feedback form:

<https://orx.typeform.com/to/uN1q7ljo>



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Climate Change: How behavioural change and economic consequences may impact operational risk

07:40 – 08:20

*Michael Grimwade, **ICBC Standard***



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Website: www.orx.org

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What is the future of operational risk modelling?

08:20 – 08:45

*Luke Carrivick, **ORX***



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Website: www.orx.org

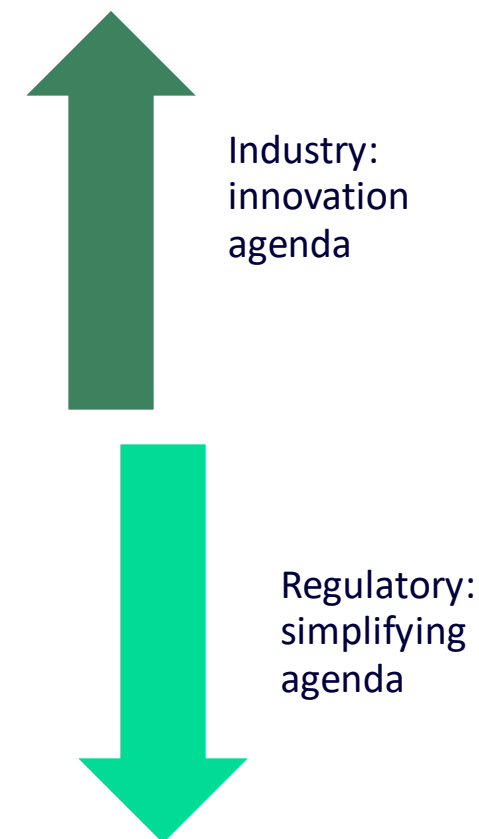
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What is the future of operational risk modelling?

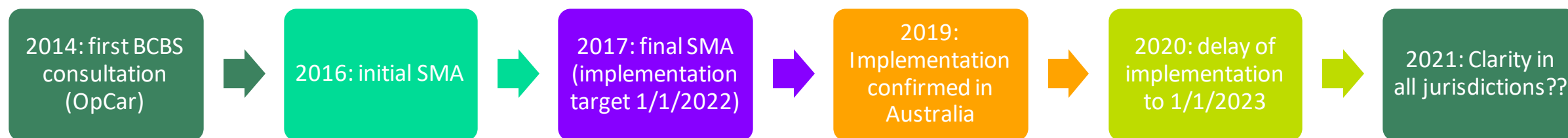
Introduction

- The **simplification** of Pillar I regulatory capital through the introduction of the SMA – the removal of a model and replacement by a formula – is likely to impact approaches to Pillar II and economic capital modelling.
- However – at the same time (as we saw above), some are taking steps to push the boundaries of operational risk measurement, innovate and adopt more sophisticated approaches.
- ORX will briefly present a few observations on what we at ORX see before handing over to our panellists
- They will give their perspectives on what the future holds, before opening the conversation out to provide an opportunity for participants to share how they see the future of operational risk modelling.



What is the future of operational risk modelling?

Pillar I Regulatory capital



What is *probably* coming

- Expectation is that within the next month regulators (on both sides of the Atlantic) will publish their implementation guidance on the SMA
- High chance that (in Europe at least) the ILM is set to 1
- However, loss data quality will be a concern as it will remain as a regulatory lever to increase capital. For this reason we will be running a study in 2022 on how to demonstrate loss data quality.

With clarity approaching we thought it would be a good opportunity to discuss where people are planning on taking their models. We do expect this to be mixed, the starting point is different - for some jurisdictions (e.g. Canada) have already moved to standardised approaches, and others (e.g. UK) in the end there were no AMA banks.

What is the future of operational risk modelling?

O.R.X

Below are some observations taken from interactions with our 103 banking and insurance members on broad modelling themes, and what we heard last week...

- High interest in capital models
 - Fundamentally it is still very useful
 - 55 participants in our [capital benchmarking](#) study - We plan to run a model methodology study in 2022 – focused on more about the philosophy of how the models are being built and the design decisions made
- Innovation in models
 - Greater flexibility and innovation – shackles of AMA are off and people are taking advantage
 - Use of wider set of data – interest in using other inputs (e.g. KRI, RCSA data)
 - Interest in factor models (see [ORX study](#))
- Models that align better with risk management
 - Expectation that the modelling units (e.g. units of measure) have a correspondence to risk management
 - Introduction of time dependency (serial correlation) to make models more risk sensitive
 - Focus on risk specific measurement from e.g. from regulators (e.g. BCBS measurement of [crypto asset risk](#)), or within the [ORX Cyber Community](#)
 - Increase in use of scenarios (we see this in [CCAR](#) and other stress tests)

Interest

Innovation

Risk
Management
Use

What is the future of operational risk modelling?

Themes for discussion

1. Where do you see use of your model going post AMA?
 - Within other regulatory exercises - stress testing?
 - For economic capital, or supporting risk management decisions?
2. With AMA constraints removed what technical innovations are you making – or thinking of making in the near future?
 - Are you considering broadening the range of input data?
 - Have you reassessed assumptions about how the model is constructed?
3. What is the end game?
 - In a perfect world where would your model be in 5 years time?
 - To what extent will it be possible to bring all of your measurement needs (stress testing, economic capital, ...) into a single “model”?





Wrap up and final remarks

08:45 – 08:50

*Giuseppe Aloï, Steve Bishop, Luke Carrivick, **ORX***



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Wrap up and final remarks



Thank you to everybody for your time and contribution to the event!



We will be asking for feedback – it would be much appreciated if you can take the time to provide this.

<https://orx.typeform.com/to/uN1q7ljo>



ORX will provide a summary of the key points discussed during the forum.



Thank you. Close of the forum

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