

The ORX Reference Taxonomy for operational and non-financial risk

SUMMARY REPORT

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Executive summary

A strategic priority for ORX and the operational and non-financial risk community

There has been a substantial change in the operational risks faced in financial services over the last 15 years. Risks such as Conduct, Cyber and Third Party have risen in importance and now dominate boardroom agendas¹. How organisations think about this expanding portfolio of threats and manage them in a consistent way is underpinned by their risk taxonomy.

This changing risk profile, combined with a recent shift of focus away from capital measurement towards risk management, means that many organisations are updating their operational risk taxonomies. In doing so, they are deviating from Basel Event Types² and in the absence of a common standard, we have observed significant divergence.

The strategic priority of this ORX initiative, supported by Oliver Wyman, was to create a common point of reference and thereby solid ground for industry discussion about developing operational risk taxonomies. This lays the foundations which allow consistent industry sharing of insights and data over the coming years.

An industry point of reference

The ORX Reference Taxonomy³ is our first iteration of a full taxonomy that goes deeper into level 2 risks. It is an enhancement of the award-winning level 1 reference taxonomy which was developed in 2018⁴. At this stage it is provided as a guide to the industry, and to encourage a convergence of thinking; it is not intended as a standard and will not be adopted in the ORX global and regional loss data exchange services. It consolidates information from 60 different taxonomies into a single coherent reference.

To best use this work, it is important to understand that:

1. This is a reference

We have published a reference taxonomy which collates many individual operational risk taxonomies in a sensible way. It is intended as a useful resource against which organisations can benchmark and improve practice. It is unlikely to meet every need without some customisation.

2. It can be used in different ways

Given the thematic nature of some risks (such as cyber), it is possible to adapt the ORX Reference Taxonomy to meet your business needs. For example, users could create meaningful groups of level 2 risks which do not appear within the same level 1 in the reference taxonomy, or they could align reference taxonomy level 2 risks to alternative level 1 risks in their own taxonomy.

3. There is a connection to Basel

It is important to note that taxonomies had not moved completely away from Basel Event Types; more accurately, they had evolved and expanded them. We observed common changes, and the reference reflects this:

- **A change of language**

Some risks closely corresponding to Basel Event Types, but with a change of language.

- **Greater focus on misconduct**

Risks which expand the Clients, Products and Business Practices category and provide greater granularity, such as Compliance, Financial Crime and Misconduct.

- **An elevation of material concerns**

Risks that have risen in prominence and are elevated to level 1. This includes Information Security, Cyber, Data, Model and Third Party.

¹ <https://managingrisktogether.orx.org/research/operational-risk-horizon-2019>

² <https://www.bis.org/bcbs/qisoprisknote.pdf>

³ The public summary of the ORX Reference Taxonomy (copyright ORX 2019) is freely available for all financial organisations to benefit from. The more detailed ORX Reference Taxonomy and guidance

is provided free of charge to all ORX members. It is available to other financial organisations – please contact communications@orx.org for further details. Commercial use of both the summary and detailed ORX Reference Taxonomy by consultants or other firms for any financial gain is not permitted without express permission from ORX and will incur a charge.

⁴ <https://managingrisktogether.orx.org/news-and-blogs/orx-wins-initiative-year-2019-operational-risk-awards>

ORX Reference Taxonomy

This infographic shows the connection of the ORX Reference Taxonomy to the Basel Event Types

Below are the level 1 event types in the ORX Reference Taxonomy (2019). For the level 2 event types, see page 10. During 2020, ORX plan to produce a corresponding cause and impact taxonomy, in addition to progressing work on controls, in order to provide an even more comprehensive reference.

Basel Event Types:



ORX Reference Taxonomy Level 1s:



This public report provides a summary of the full report available to ORX members. It includes a background to this work, an overview of the method applied to develop the ORX Reference Taxonomy, notable observations from the taxonomy data collected from ORX members and the Level 1 and 2 risk titles.

ORX Reference Taxonomy resources available

ORX can provide a full set of ORX Reference Taxonomy resources, including:

- The full ORX Reference Taxonomy report that includes further analysis and information on the member taxonomy data collected, as well as deep dives on approaches to Cyber, Conduct and Third Party risk
- The Reference Taxonomy level 1 and level 2 risks with comprehensive definitions
- Guidance supporting users to understand the application of the ORX Reference Taxonomy
- A mapping of the taxonomy back to Basel Event types

If you would like further information on these, please contact communications@orx.org

During 2020, in order to provide an even more comprehensive reference, ORX plan to produce a corresponding cause and impact taxonomy, in addition to progressing work on controls.

The ORX Reference Taxonomy will also be incorporated into the ORX News⁵ service (see page 13 for more details about ORX News).

⁵ <https://managingrisktogether.orx.org/orx-news>

Introduction

A level 1 reference taxonomy

In 2018, an ORX research study⁶ developed an emerging level 1 ORX Reference Taxonomy. 90% of the 2018 study's 40 participants had adopted an enhanced taxonomy which captures the key risks they see in today's business environment, and one which is defined in a language familiar to their business leaders.

It was, however, important to note that a significant majority had not moved completely away from Basel Event Types – more accurately they had evolved and expanded them. This held true for participants who self-identified as following a Basel structure, but also true to an extent with those who self-identified as having developed their own taxonomy.

In some cases, we have observed more wholesale changes, particularly with participants who self-identified as having developed their own taxonomy. This allows more freedom in the way they can express their risk profile. It in turn often results in a larger number of level 1 risks (compared to the Basel structure), reflecting the desire to elevate certain risks to higher prominence.

A full reference taxonomy

Building on the significant interest from ORX members, the wider industry and regulators in the 2018 taxonomy work, ORX has been pleased to work with Oliver Wyman using a larger set of taxonomies to:

1. **Develop an updated ORX Reference Taxonomy, including level 2 risks**
2. **Provide guidance to support and explain the taxonomy**

This taxonomy can be used as a key reference to benchmark against and to observe industry trends. It is not a standard specifically intended to be adopted wholesale but can assist organisations in developing their taxonomies, provide industry evidence to support change and allow them to accelerate their thinking.

⁶ <https://managingrisktogether.orx.org/operational-risk-taxonomy/orx-reference-taxonomy-2019>

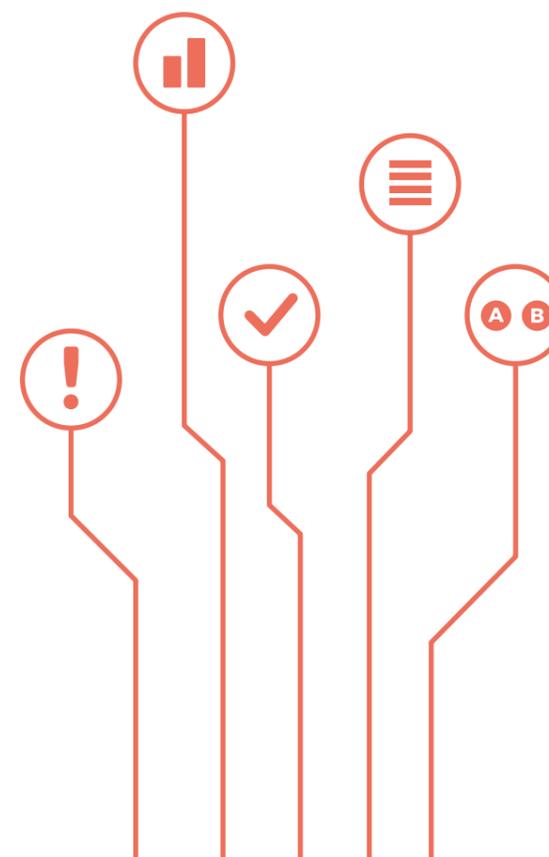
Method

Working with Oliver Wyman, ORX reviewed an expanded data set of 58 ORX member taxonomies (collected from banks and insurers).⁷ This was used to validate the 2018 level 1 reference, derive suitable supporting level 2 risks and to develop guidance.

We have then worked with a member advisory group to review, update and finalise the taxonomy.

During this work, several principles have been applied to develop the ORX Reference Taxonomy, namely that it should:

- Be risk event based⁸
- Be designed to include two levels
- Be intuitive and easy to understand
- Cover the scope of – and map back to – Basel Event Types
- Be mutually exclusive and collectively exhaustive (to the extent possible)



Data in the driving seat

The data collected from ORX member taxonomies demonstrates that there are numerous equally valid approaches to risk taxonomy construction. Differences can arise because of an individual organisation's decisions regarding both the risks to include and where to position them. These decisions are influenced by external factors such as jurisdictional trends and idiosyncratic ones, such as internal organisational structures and the businesses in which an organisation operates. Establishing a taxonomy is not a perfect science and often requires the application of common sense and compromise.

The factors above, as well as the absence of industry-wide taxonomy developments, highlight the need for ORX to enhance the reference taxonomy and develop the level 2 categories.

Central to this development has been the use of the collected ORX member taxonomy data in a systematic and transparent way. Initially, data was used to validate and update the level 1 categories identified as part of the 2018 ORX study, then further analysis has been undertaken to assist in the development of the supporting level 2 risks for the enhanced taxonomy.

This analysis to develop level 2 risks involved:

- Identification of the "risk dimensions" used to describe each level 1/level 2 risk; for example, under External Fraud, level 2 risks in participant taxonomies are linked to dimensions including actor, item, product and channel
- The adoption of either the most common approach to level 2 risks or, where significant divergence was observed, using the most consistent approach to determine level 2 risks
- Review and feedback from the member advisory group of the risks where practice diverged the most

⁷ Two member taxonomies were added subsequently which were used to validate the proposed ORX Reference Taxonomy, taking the dataset to 60.

⁸ As opposed to cause or impact based: see page 14 on the bow tie methodology

Observations from the taxonomy data

The review of participant taxonomies highlighted several themes, with some interesting and notable observations:

- **Increase in level 1 size and use of risk “themes”**

Relative to the Basel Event Types, overall there is an increase in the number of level 1 risks in the taxonomies collected. On average there were of 14 level 1 risks versus the 7 original level 1 Basel Event Types. Another way of capturing increasing prominence in certain risk types is the increased use of risk “themes” as standalone risk categories, for example Conduct and Cyber.⁹

The increase of both level 1 risks and in the use of risk themes potentially reflects a more developed and granular approach to defining operational risk. It may also reflect the increased number of risks uniquely recognised under the operational risk umbrella.¹⁰

- **Use of different dimensions**

For several risks, participants use a combination of different “dimensions” to define their level 2 risks. This was particularly evident for Conduct – where dimensions observed relate to market integrity, products and services, as well as clients and business practices. Different dimensions were also evident for External Fraud (as mentioned in the “Data in the driving seat” section on page 7) and for Internal Fraud (similar to External Fraud). Although the combinations of dimensions used can appear illogical, this pattern may have evolved as taxonomies are developed over time, with categories being added to respond to new threats or risks, or new regulatory areas of focus. Often organisations do not have the luxury of starting their taxonomy again.

- **Control failures**

Often participating taxonomies included level 2 risks that could be classed as causes and/or control failures. Given the increasing likelihood that organisations are penalised for inadequate control frameworks or control failures, without strictly having had an event occur, this may reflect a pragmatic approach to incorporate incidents that could lead to an impact.

Divergence was evident

In addition to the observations already mentioned, there was divergent practice evident in the participant taxonomies. The widest range of practice was seen within the risks that have risen in prominence – those often described as more “thematic” than pure risks (as per the control failures observation). This included Cyber, Conduct and Third Party.

Analysis highlighted that the 60 participants take different approaches to categorising these risks. Approaches observed included the use of such categories as level 1 risks, using impact and causal taxonomies to support classification, as well as the use of flags to indicate where an event may relate to more than one risk type.

As an example of the variances observed, an event captured as External Fraud may have a cyber-attack at its cause. Depending on an organisation’s approach, this could be classified as Cyber, or as an External Fraud with a Cyber cause, or as an External Fraud tagged with a Cyber flag. A further example is a technology failure event that may impact customers. This could be recorded as Conduct, or as a technology failure with a customer or conduct impact, or as a technology failure tagged with a Conduct flag.

These variances may well have arisen due to a lack of an industry standard covering such risks. Organisations’ taxonomies have grown organically, gaining idiosyncratic features influenced by factors such as the organisation’s approach to risk management, their jurisdiction and regulator.

In the full ORX Reference Taxonomy report available, there is further information outlining the analysis undertaken on the taxonomy data and the observations set out here. Supporting this there are also deep dives looking specifically at industry approaches taken for the categorisation of Cyber, Conduct and Third Party risks and further explanation of the approach and logic applied when developing these areas in the ORX Reference Taxonomy.

Please get in touch with ORX at communications@orx.org for further information about this full report on the ORX Reference Taxonomy.

Why a reference and what next?

Given the observations and areas of divergence described for certain risks, ORX believe it is extremely helpful to publish this taxonomy as a reference. The aim at this stage is to help develop consistent industry thinking rather than provide a taxonomy intended as a wholesale standard.

It is hoped the ORX Reference Taxonomy has captured the wisdom of crowds and distilled many of the successful features of operational risk taxonomies from across the industry.

It will not currently be used for the ORX global loss data exchange services. However, ORX will seek feedback from its membership, the wider industry and regulators, including understanding where it has been adopted and the results of any benchmarking work. We also intend to re-run the initiative in 12 to 18 months’ time.

Updating the taxonomy iteratively will allow ORX to collect updated taxonomies and review the effectiveness of the reference, help ensure it remains relevant and inclusive of key industry risks, and monitor potential convergence towards a future industry standard.

ORX Reference Taxonomy in action

ORX will use the reference taxonomy during 2020 in ORX News¹¹. This will allow it to be tested in action and support subscribers to the ORX News service in searches and reports.

We also aim to use the taxonomy in other information services and products, particularly focusing on how we analyse and report on material risks.

See page 12 for more information about ORX and our services.

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An elevation of material concerns

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⁹ ORX has also explored cyber definitions and taxonomies as part of our Cyber & Information Security Risk (CISR) programme: <https://managingrisktogether.orx.org/cyber-risk-programme>

¹⁰ <https://managingrisktogether.orx.org/research/role-and-scope-op-risk>

¹¹ <https://managingrisktogether.orx.org/orx-news>

The ORX Reference Taxonomy¹²

Level 1 Risks	Level 2 Risks
People	Breach of employment legislation or regulatory requirements
	Ineffective employment relations
	Inadequate workplace safety
External Fraud	Third party/vendor fraud
	Agent/broker/intermediary fraud
	First party fraud
Internal Fraud	Internal fraud committed against the organisation
	Internal fraud committed against customers/clients, or third/fourth parties
Physical Security & Safety	Damage to organisation's physical asset
	Injury to employee or affiliates outside the workplace
	Damage or injury to public asset
Business Continuity	Inadequate business continuity planning/event management
Transaction Processing and Execution	Processing/execution failure relating to clients and products
	Processing/execution failure relating to securities and collateral
	Processing/execution failure relating to third party
	Processing/execution failure relating to internal operations
	Change execution failure
Technology	Hardware failure
	Software failure
	Network failure
Conduct	Insider trading
	Anti-trust/anti-competition
	Improper market practices
	Pre-sales service failure
	Post-sales service failure
	Client mistreatment/failure to fulfil duties to customers
	Client account mismanagement
	Improper distribution/marketing
	Improper product/service design
	Whistleblowing
Breach of code of conduct and employee misbehaviour	

Level 1 Risks	Level 2 Risks
Legal	Mishandling of legal processes
	Contractual rights/obligation failures
	Non-contractual rights/obligation failures
Financial Crime	Money laundering and terrorism financing
	Sanctions violation
	Bribery and corruption
	KYC and transaction monitoring control failure
Regulatory Compliance	Ineffective relationship with regulators
	Inadequate response to regulatory change
	Improper licensing/certification/registration
	Breach of cross-border activities/extra-territorial regulations
Third Party	Prudential risk
	Third party management control failure
	Third party criminality/non-compliance with rules and regulations
	Inadequate intra-group agreements/SLAs
Information Security (including Cyber)	Data theft/malicious manipulation of data
	Data loss
	Cyber risk events
	Data privacy breach/confidentiality mismanagement
Statutory Reporting and Tax	Improper access to data
	External financial and regulatory reporting failure
	Tax payment/filing failure
Data Management	Trade/transaction reporting failure
	Unavailability of data
	Poor data quality
Model	Inadequate data architecture/IT infrastructure
	Inadequate data storage/retention and destruction management
	Model/methodology design error
	Model implementation error
	Model application error

¹² The public summary of the ORX Reference Taxonomy (copyright ORX 2019) is freely available for all financial organisations to benefit from. The more detailed ORX Reference Taxonomy and guidance is provided free of charge to all ORX members. It is available to other financial organisations – please contact communications@orx.org for further details. Commercial use of the both the summary and detailed ORX Reference Taxonomy by consultants or other firms for any financial gain is not permitted without express permission from ORX and will incur a charge.

O.R.X

Delivering leading-edge support services

ORX have a range of services, projects and events to support the sharing of ideas in the wider measurement and management of operational and non-financial risk.

While membership is our core offering, there are also many other services and resources available for the wider operational risk community to benefit from.

Initially set up to provide a global platform for the secure and anonymised exchange of high-quality loss data, ORX has developed its remit substantially over the years thanks to the collaboration of the community of risk professionals we bring together.

Why not join the community to see how you could benefit?

Premium subscription services

ORX has developed two premium support services that don't require you to be an ORX member. Both are available to any financial organisation* to benefit from, with a discounted price for members.

O.R.X Scenarios

This service provides you with an extensive scenario library, scenario practice benchmark studies, and access to a global scenario practitioner network.

In addition, ORX Scenarios provides a scenario development handbook and a risk intelligence pack. Our Scenarios developments are continuing, for example an additional focus on increasing the practical outputs of scenarios.

1050+ Scenarios in our library

ORX Scenarios key benefits:

- Access to an industry-leading scenario library, containing over 1,000 quality scenarios from the leading financial services firms globally
- Access to a global scenario practitioner network, including free invitation-only events such as our global Scenario & Analytics Forum and regular working groups
- Scenario practice benchmark studies, providing thought leadership to enhance your internal practices
- A scenario development handbook – a roadmap for creating and quantifying scenarios for specific risks, such as cyber
- Risk intelligence packs – ready-made packs of external information to support scenario development

* ORX Scenarios is subject to requirements and conditions of data collection being met

O.R.X News

ORX News is an industry-leading provider of publicly reported operational risk loss events from around the world. It is a single source for data and analysis, covering the banking, insurance and asset management sectors.

In addition to reporting risk loss events within a 24-hour period, ORX News produces "deep dives" upon request about key events to gain a risk-focused view of significant losses.

8000+ News stories on our platform

ORX News key benefits:

- Very competitive pricing due to ORX being a not-for-profit organisation
- A fast turnaround – headline published within 24 hours
- No limit on access, with unlimited user licences
- Financial services specific, plus cyber stories from other industries
- High-quality, concise summaries from our team of professional researchers
- Alerts and categories that can be customised to your interests
- Sophisticated reporting functionality – reports can be exported in Excel or PDF
- Global coverage – our researchers speak nine languages collectively
- Free personalised system training for all users in your organisation

NEW: An Application Programming Interface (API) allowing you to automatically pull ORX News data into your own system, for example your GRC platform. Contact support@orx.org for more info

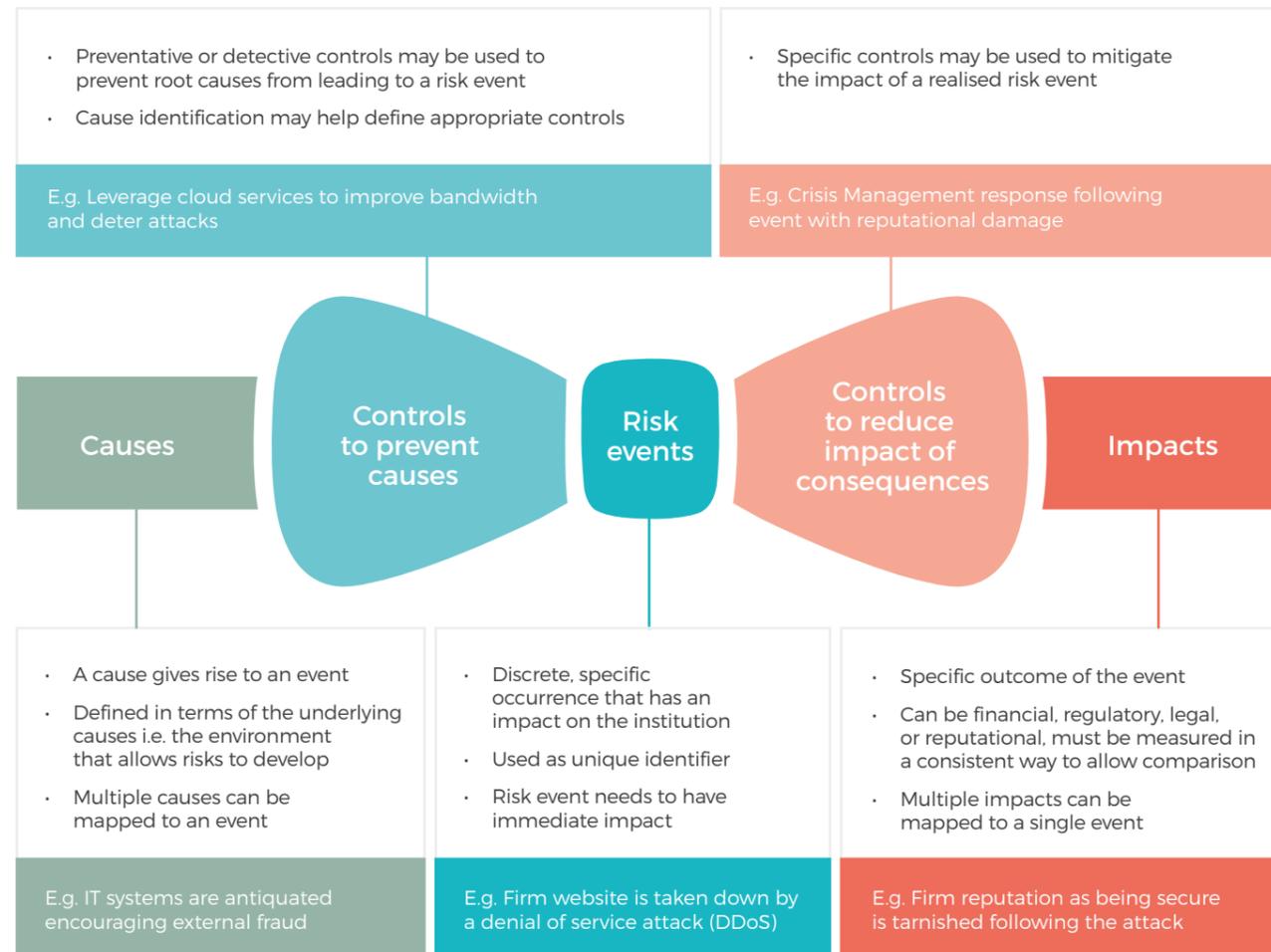
Appendix: bow tie methodology

The ORX Reference Taxonomy is based on the “bow tie” method (see Figure 1), which distinguishes between causes, events, impacts and controls. These are defined as follows:

- **Cause:** The risk causes constitute the underlying environment that allows risk events to develop. These causes therefore go beyond the immediate triggers of an event, such as control failure. Multiple causes can be mapped to an event.
- **Event:** The risk event is the central element of the framework, and is a discrete, specific occurrence, one degree removed from the impact on the organisation or its stakeholders.
- **Impact:** The risk event can have direct and/or indirect impact on an organisation and its stakeholders. Multiple impacts can be assigned to a risk event.

Figure 1. Bow Tie Method

The “bow tie” method is used to ensure that only such events are captured by the taxonomy which plausibly lead to a direct impact.



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About ORX

ORX is the largest operational risk association in the financial sector and has been a leading support for the industry since 2002.

For nearly two decades, we have been an ever expanding global community, bringing together thousands of operational risk professionals to share knowledge, expertise and experience.

Our services include a range of solutions focused on effective management and measurement of operational and non-financial risk. This includes global loss data exchange, an extensive research programme and a series of events held around the world.

We not only support individual organisations to assess their vulnerability to losses, but we also shape industry-wide development of best practice.

ORX is owned and managed by over 95 financial firms from all over the world. As a not-for-profit organisation, we invest all income back into providing high-quality benefits for operational and non-financial risk professionals. This ultimately helps develop the future direction of the discipline.

About Oliver Wyman

Oliver Wyman is a global leader in management consulting that combines deep industry knowledge with specialised expertise in strategy, operations, risk management, and organisation transformation.

For more information please contact the marketing department by email at info-FS@oliverwyman.com or by phone at one of the following locations:

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EMEA	44 20 7333 8333
ASIA PACIFIC	65 6510 9700

ORX would like to thank all members who provided their taxonomies, and particularly those who were part of the member advisory group.

