A Global Tour d'Horizon of Conduct Risk Methodologies

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For this article, she leveraged her global network of conduct risk experts for insights on global trends.

Conduct risk methodologies are evolving at top speed to match the need for better controls across all sectors. For example, earlier this year, Nicolai Tangen, CEO at Norges Bank Investment Management (NBIM) posted on LinkedIn:

«One year ago we invited an anthropologist into the fund to have an inside look. The thinking was: if it's good, then it is good. If it's bad, then it is good, because then we know what to improve! Here is the report, we are already working on the improvement points.»[1] Attached was the report 'Anthropological gaze, stories, and reflections on NBIM culture'.[2]

Tangen manages Norway's oil fund with a market value of 1.633 billion dollar as of March 31, 2024, yet he turns to anthropology to gain better insight into the organizational culture of the fund. Intriguing, is it not?

However, I will leave it to the reader to delve into the findings of the report as this article focuses on examining the applied methodology itself.

1   What is conduct risk?

It may come as a surprise that there is no rigorous definition as would be typical for academic studies.[3] In fact, the answer to the above question varies depending on which people, professions, organizations, and industries you ask. The same applies to related terms such as 'behavior risk' and 'corporate culture'.
Moreover, in high-stakes industries such as aviation and railways, where human factors – or ergonomics – are crucial, the term 'conduct risk' is not even commonly used.[4]

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1   See, Norges Bank Investment Management and Nicolai Tangen's LinkedIn post on January 2024.
2   See, Danielsen, T., «Anthropological gaze, stories, and reflections on NBIM culture», 2023.
3   See, Reader, T., & Scott, S., «What is Conduct Risk?», 2023.
4   This scientific discipline is concerned with the understanding of interactions among humans and other elements of a system, see, e.g., Ergonomics Knowledge Areas, and Shorrock, S., «Four kinds of 'human factors'», 2017.

2 Conduct risk in terms of practice

Instead of offering a definition of conduct risk, this article explores different practical applications. Similar to a library, it includes multiple links for deeper exploration to promote cross-industry dialogue.

Why is managing conduct risk crucial? Take, for example, the case of Credit Suisse. Finma's recent post-mortem report revealed that poor risk management culture was among the main reasons for the bank's collapse.[5]

Structured in three parts, the article first introduces practical applications of conduct risk methodologies as reported by practitioners. Second, it discusses key observations, and finally it presents pivotal questions essential for boards to consider when selecting their conduct risk strategy.

3 Conduct risk methodologies from A to Z

This article includes feedback from 25 practitioners across diverse professions, industries, and continents gathered through written forms and interviews.[6] By deliberately leaving out a 'conduct risk' definition, contributors were encouraged to provide insights based on their personal interpretations of the term.

The results indicate a spectrum of methodologies used in practice, ranging from simple, straightforward approaches to AI-powered data insights and sophisticated organizational maturity models and safety concepts.

For ease of reference, the approaches are listed alphabetically and numbered accordingly. The methodologies are not categorized, recognizing that many can be grouped across multiple categories.

1. **Anthropology.** Anthropologists work qualitatively, holistically, and bottom-up to describe and discuss social structures, signs, rituals, artefacts, and patterns. The NBIM report is based on several months of anthropological fieldwork, i.e., 'participant observation'.[7] New compliance approaches shift focus from traditional paperwork and surveys to insightful anthropological observation.[8]

2. **AI-guided mixed methods approach to measure culture.** London School of Economics Professors Alex Gillespie and Tom Reader utilize the latest advances in natural language processing to scale and score textual data on dimensions of risk culture. The approach allows for both overall benchmarking of the company or unit and the identification of high-scoring text segments, which are then analyzed qualitatively. It draws on over a decade of research and multiple peer-reviewed articles on corporate culture and risk.[9]

3. **Assessing subcultures that may drive risk.** To assess social, group and cultural influences (e.g., social norms, group dynamics, shared beliefs), NatWest Group's Internal Audit Behavioral Risk team utilizes a mixed methods approach. The approach involves qualitative data (e.g. interviews, observations, leadership communications, policy and procedures, targets etc.) and quantitative data (e.g. surveys, re-analysis of secondary data e.g. conduct, commercial or HR data). Conclusions are triangulated from across the different data sources. The approach is designed to assess the behaviors and mindsets characterizing a particular team or function (not one-off behaviors); identify what drives those behaviors and pre-empt future outcomes they might lead to (e.g., conduct risk or strategic risk).

4. Assessing the impact of customer choice architecture on customer behavior. To examine customer choice architecture, NatWest Group's Internal Audit Behavioral Risk team uses sophisticated econometric approaches or randomized controlled trials, and some qualitative data. The goal is to assess the unique impact of a particular activity, event, product, or service (e.g., customer communications) on customer behaviors and, ultimately, an outcome of interest (e.g., customers getting into financial difficulty or risk events).

5. Aviation. At the level of pilots and cockpit crews: Crew Resource Management (CRM, methodology no. 6) and Threat and Error Management (TEM, methodology no. 32). At the level of the airline: Line Operations Safety Audit (LOSA, methodology no. 11), Safety Culture Assessments (methodology no. 18), and Safety 1 and 2 (methodologies no. 19 and 20).

6. Crew Resource Management (CRM). CRM focuses on utilizing all available resources (equipment, information, personnel) to enhance safety and efficiency in flight operations. It involves training in communication, situational awareness, decision-making, teamwork, and conflict management. This method helps reduce human errors that contribute to most aviation accidents.[10]

7. Data approaches. Next to conducting behavioral risk reviews, assessments, and deep dives, banks such as ING and Citi are working on sound large data approaches, to use AI in analyzing communication data, e.g., emails and chats, to get further insights.

8. Just Culture. A Just Culture approach is defined as a culture in which front line operators and others are not punished for actions, omissions and decisions taken by them that are commensurate with their experience and training, but where gross negligence, willful violations and destructive act are not tolerated.[11]

9. Leadership. (i) Fair and Caring LeadershipTM is a toolbox to become a fair and caring leader.[12] (ii) Visible Felt Leadership is a key component of Anglo American's Safety Leadership methodology which has been shown to drive tangible improvements in safety outcomes.[13] (iii) Enhance transparency within management teams by fostering openness and receptivity to feedback and diverse perspectives. (iv) To successfully manage non-financial risks like reputational and operational risks, risk managers need to be leaders, not just managers.[14]

10. Learning analytics. (i) Utilize data analysis and behavioral modelling for predicting and managing behavioral risks within learning and development programs. (ii) To minimize behavioral risks associated with the adoption of new technologies and enhance culture-oriented personnel development, companies are identifying patterns and trends in their employees' learning behaviors. This enables the creation of personalized learning pathways and the early identification and addressing of potential risks, such as lack of engagement or ineffective learnings strategies.

11. Learning platforms. Integrate gamification elements in digital learning platforms to boost employee engagement and motivation, and mitigate the risk of disinterest and the consequent loss of productivity and innovation.

12. Line Operations Safety Audit (LOSA). LOSA is a proactive safety monitoring program aimed at assessing operational risks and the effectiveness of Threat and Error Management (TEM) through observation of normal flight operations. It provides an objective analysis and promotes a safety culture within an airline.[15]

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10 See, e.g., SKYbrary, Crew Resource Management (CRM), and EASA Pro, CRM Training Implementation, 2017.
11 See, e.g., SKYbrary, «Just Culture Repository», and, in German only, «Just Culture».

12 See, «Fair and Caring Leadership».
13 See, «Visible Felt Leadership – An interactive learning guide», sponsored by the Anglo American Safety Academy.
14 See, e.g., Rieger, K., «What does leadership have to do with risk management», 2021.
15 See, e.g., SKYbrary, «Line Operations Safety Audit (LOSA)».

13. **Management responsiveness to risk.** (i) Assess managing directors semi-annually or annually on key behaviors, such sharing of information with audit, risk, and compliance teams, their demonstration of risk awareness, issue ownership, and punctuality for meetings. Results are reported to the board and can influence bonuses and promotions. (ii) In audits, evaluate management's responsiveness to risk by examining their ownership of risks, proactive self-reporting of issues, and implementation of corrective actions.

14. **NatWest Group's Internal Audit Behavioral Risk team.** Post-financial crisis, NatWest Group pioneered a behavioral risk capability within its internal audit function. The core principle of the team is forward-looking, pre-emptive, and data-driven.[16] The team assesses behavioral risk factors using insights and methods from across the behavioral and social sciences. This includes examining (i) organizational choice architecture (e.g., incentives, decision processes, targets, policies, and procedures), (ii) customer choice architecture (e.g., customer communications and interfaces), (iii) social, group, and cultural influences (e.g., social norms, group dynamics, and shared beliefs), and (iv) decision-making heuristics and biases (e.g., overconfidence). More insights about the team's approach can be found in methodologies no. 3 and 4.

15. **Obtaining an understanding of soft controls related to an audit of financial statements.** NBA Practice Note 1148 of the Royal Netherlands Institute of Chartered Accountants offers the auditor concrete guidelines for obtaining an understanding of the culture, behavior and soft controls within entities.[17]

16. **Psychological Safety.** 'The Fearless Organization Scan' measures psychological safety.[18]

17. **Railways.** Human and Organizational Factors (HOF) are essential components of the Safety Management System (SMS) in the rail transport cluster. HOF aspects are naturally embedded in SMS standard audits (mainly in the second line of defense) in the sector. Since 2019, this topic has been a focus of regulatory oversight.[19]

18. **Risk Type Compass™.** A peer-reviewed psychometric tool evaluates an individual's subjective interpretation of risk, while also offering a team or organizational perspective to highlight vulnerabilities within the organization.[20]

19. **Safety Culture Assessments.** Assessing the safety culture within an airline aims to understand and improve the awareness, attitudes, beliefs, and behaviors of all employees regarding safety. A strong safety culture is fundamental for minimizing behavioral risks and promoting a safe operating environment. The safety culture is closely linked to a practiced Just Culture; without it, there is little or insufficient reflection on errors.[21]

20. **Safety 1.** Safety 1 focuses on preventing accidents and incidents through the identification and management of hazards. It is based on the assumption that safety is achieved by preventing errors and deviations from standard procedures. In practice, this includes conducting safety audits, incident analysis, and strict adherence to safety regulations and procedures. Safety 1 emphasizes the importance of compliance and the minimization of risks through preventive measures.

16   See, e.g., Eccles, R. G., in Forbes, «How The Behavioral Risk Team Is Innovating The Internal Audit Function at NatWest», 2022, and Engler, H., & Wood, A., in Harvard Business Review, «How Banks Are Using Behavioral Science to Prevent Scandals», 2020.
17   Koninklijke Nederlandse Beroepsorganisatie van Accountants, Unofficial Translation, NBA Practice Note 1148, «Obtaining an understanding of soft controls related to an audit of financial statements», 2022.
18   See, «The Fearless Organization Scan».

19   See, e.g., European Union Agency for Railways, «Human and Organisational Factors (HOF)» and «Safety Management Systems (SMS)», and RailHOF, a collaborative project between the European Union Agency for Railways (ERA) and the International Union of Railways (UIC).
20   See, Risk Type Compass.
21   See, e.g., SKYbrary, «Industry Safety Culture Evaluation Tool and Guidance», SKYbrary, «Assessing Safety Culture in ATM», and Hollnagel, E., in SKYbrary, Hindsight 18, «Is justice really important for safety?», 2013.

21. Safety 2. Contrary to Safety 1, which focuses on preventing errors, Safety 2 explores how organizations can operate successfully and remain safe across a wide range of conditions. This approach acknowledges that in the complex world of aviation, not all uncertainties can be anticipated or covered by rules. Safety 2 promotes the flexibility, adaptability, and resilience of the systems and personnel by focusing on how everyday operations can proceed safely and effectively. It involves understanding what works well and building upon it, rather than solely focusing on what could go wrong. This is also referred to as «Learning from the Positive».[22]

22. Simple, straightforward approaches. (i) Ask Five Times Why.[23] (ii) 'Can We? Should We? Test', a simple yet powerful tool to support ethical decision making. (iii) Influence behavior with micro-actions.[24] (iv) Perform post-mortems.[25] (v) Surprise & Delight Your Employees, an approach aimed at those with 'access to money'.[26] (vi) The Newspaper Check, taught to business as a preliminary control before engagement, asks: 'If my family and friends saw this piece of news on the front-page tomorrow, how would they feel and react?'.

23. Social Governance. Diverse perspectives support better risk and decision taking, and a diverse and collaborative workforce is better at innovation.[27]

24. Supervisory bodies. (i) De Nederlandsche Bank supervises behavior and culture by examining the board's decision-making, leadership, communications, group dynamics, behavior patterns, and mindset.[28] (ii) The Federal Reserve Bank of New York recently hosted a panel discussing error admission methods with speakers from high-stakes industries such as nuclear and medicine.[29] (iii) The Australian Prudential Regulation Authority (APRA) has documented their evolving approach to supervising risk culture.[30] (iv) The Financial Conduct Authority (FCA) defines culture as the habitual behaviors and mindsets of an organization, focusing on the four key drivers: Purpose, Leadership, Reward Systems, and Governance.[31]

25. System-Theoretic Process Analysis (STPA). Systems Thinking applied to safety, including workplace safety and organizational and social analysis.[32]

26. Terrorist threat management. How is it done, and what are the best threat management approaches to do this effectively? Scenario-based or situation-based management models consider the emergent conditions for a terrorist attack and the vulnerabilities that could be exploited, to determine available resources needed to prevent catastrophic outcomes from occurring.[33] The limits of this approach have been highlighted by many, where instead proposals have been made for driver-based or causal-effect based threat management models.[34]

22 See, e.g., SKYbrary, Eurocontrol «From Safety-I to Safety-II: A White Paper», 2013, and Federal Aviation Administration, «Safety Culture Assessment and Continuous Improvement in Aviation: A Literature Review», 2023.
23 See, e.g., American Society for Quality (ASQ), «Five Whys and Five Hows».
24 See, e.g., Unbossers, «An alternative approach to sustainable behavioural change in the workplace».
25 See, e.g., PMI.org, «The use of project post-mortems».
26 To maintain the appearance that 'nothing is set in stone', mix things up to keep employees on their toes. If you only look at checks over $5 000 pull one for $500. If the audit is done in June have the auditors come in October.
27 See, e.g., Rieger, K., «Social Governance: What can we learn from the world around us?», 2021.
28 See, De Nederlandsche Bank, «Supervision of governance, behavior and culture».
29 The 2023 and 2024 conference recordings are available for online viewing.
30 See, e.g., APRA, «APRA's evolving approach to supervising risk culture».
31 See, e.g., FCA, «Culture and Governance».
32 See, e.g., Leveson, N. G., & Thomas, J. P., «STPA Handbook», 2018, and Nancy Leveson's webpage.
33 See, Lagner, R., & Singer, B., «SCADA Threat Modeling Using Attack Scenarios», in Proceedings of the SCADA Security Scientific Symposium, 2008.
34 See, Wright, G., & Goodwin, P., «Decision making and planning under low levels of predictability: Enhancing the scenario method», in International Journal of Forecasting, 2009.

Of the many reasons proposed, compared to a driver-based approach that examines mechanisms that apply to different possible outcomes that lends itself to a systems-based approach that is general purpose, focusing on threats in scenarios constrains the generalizability of responses to new threats, and crucially limits the applicability of ever-expanding advances in the mining of data[35] to improve identification and mitigation of threats.[36]

27. The Corporate Ethical Virtues Model. Team ethical culture as a coupling mechanism between a well-implemented organizational ethics program and the prevention of unethical behavior in teams.[37]

28. The Hudson Safety Ladder. A model which describes the development of an organization's safety culture. Take a look at Figure 1 for more information.

29. The Organizational Maturity Index (OMINDEX®). The Organizational Maturity Index (OMINDEX®)[38] measures causal links between the management of a company's human capital and material value and risk across all stakeholders. OMINDEX® is a holistic, human measure of organizational health. It integrates purpose, strategy, systems, and key cultural factors that compare directly with financial 'AAA' ratings.[39] Research findings link higher OMINDEX® scores to improved business value and lower risk; including financial, human, and environmental outcomes. This is what the Maturity Institute measures as Total Stakeholder Value.[40]

Figure 1: Types of Safety Cultures

Increasingly Informed

Pathological	Reactive	Calculative	Proactive	Generative
We don't care as long as we're not caught!	Safety is important, we do a lot every time we have an accident!	We have systems in place to manage all hazards	Safety leadership and values drive our continuous improvement	Safety is how we do everything round here

Increasing Trust and Accountability

Credit: Professor Patrick Hudson

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35 See, Shenvi, A., Bunnin, F. O., & Smith, J. Q., «A Bayesian decision support system for counteracting activities of terrorist groups», in Journal of the Royal Statistical Society Series A: Statistics in Society, 2023.

36 Received from Magda Osman, Principal Research Associate in Basic and Applied Decision Making, Cambridge Judge Business School, University of Cambridge.

37 See, Cabana, G.C., & Kaptein, M., «Team Ethical Cultures Within an Organization: A Differentiation Perspective on Their Existence and Relevance», 2019, and «Team ethical culture as a coupling mechanism between a well-implemented organizational ethics program and the prevention of unethical behavior in teams», 2024.

38 See, Maturity Institute, «OMINDEX®».

39 See, Bonds&Loans, July / August 2019 edition, «Capturing Human Risk's Influence on Credit Risk Remains Elusive – But That Might Be About to Change», p. 6.

40 See, Maturity Institute, «Total Stakeholder Value (TSV)».

30. The Organizational Personality (TOP) Framework / Finance without Numbers. TOP is a theoretically based methodology for analyzing and benchmarking a company's behavior preferences. Textual data is scaled on dimensions of behavior patterns, allowing reliable forward-looking insights into non-financial risk governance. The approach allows for assessing compliance with external standards at the level of behavior patterns. When aggregated in terms of an organizational personality profile, TOP enables corporate culture to be assessed from the 'outside'.[41]

31. The Starling Compendium on Culture and Conduct Risk in the Banking Sector. Since its 2018 launch, The Starling Compendium has become a key resource for culture and conduct risk in banking, with over 40 experts contributing to the 2023 edition.[42]

32. The 7-S Framework. A framework introduced to address the critical role of coordination, rather than structure, in organizational effectiveness.[43]

33. Threat and Error Management (TEM). TEM is a comprehensive approach to understanding and managing threats and errors in the aviation industry. It involves identifying threats, managing errors, and avoiding undesired states. TEM integrates concepts from Crew Resource Management (CRM) and is utilized in training and flight operations to enhance safety and mitigate occurring and perceived risks before an incident or accident occurs.[44]

34. Training: Low-Fidelity-Trainings for non-technical skills. Involves sessions with a greater content divergence from technical-operational everyday life. Participants are intentionally removed from their familiar work environments and placed into different contexts (e.g., outdoor settings, Lego games) where their technical skills, routines, and experience do not directly apply. The advantage of this approach is that mental processes, intra- and interpersonal competencies, and non-technical skills such as communication, leadership, team cooperation, and resilience become much more visible. They can be deliberately reflected upon and developed without being overshadowed by technical aspects.[45]

35. Training. (i) Use real-life examples, scenarios, and moral dilemmas in ethics training to assess individual's moral reactions and understanding. (ii) Use collective training and reflection on case studies and big failures, i.e., 'could it happen in our organization?' (iii) Use scenario analysis, i.e., constant open reflection on what could go wrong and how to react. (iv) Conduct on-site orientations, safety trainings, and install signage at construction sites.

36. Unobtrusive Corporate Culture Analysis Tool (UCCAT). UCCAT is a theoretically based and scientifically tested methodology for analyzing and benchmarking corporate culture. It measures 108 «unobtrusive indicators of organizational culture» (UIC). Each UIC represents an observable and measurable aspect of organizational activity indicative of culture. When aggregated in terms of cultural dimensions, UICs allow corporate culture to be assessed from the 'outside'.[46]

41   See, e.g., Siegenthaler, B.R., «Evaluating The Organization's Innovation Capability: A New Guiding Methodology», 2021, and Siegenthaler, B.R., «CEO vs CFO vs CPO (Chief HUMAN PATTERNS Officer», 2023.
42   See, Starling Trust, «The Starling Compendium».
43   See, e.g., McKinsey Quarterly, «Enduring Ideas: The 7-S Framework», 2008.
44   See, e.g., SKYbrary, Threat and Error Management (TEM); Merritt. A., & Klinect. J., Defensive Flying for Pilots: An Introduction to Threat and Error Management, 2006; Helmreich, R. L., On error management: lessons from aviation, 2000; and Decker, S.W.A., From threat and error management (TEM) to resilience, 2006.

45   See, e.g., Nicolaides et al. «Team performance training for medical students: Low vs high fidelity simulation», 2020; Scott, A., & Gartner, A., «Low fidelity simulation in a high fidelity world», in Postgraduate Medical Journal, 2019, and Human Factors Hamburg, «Low-Fidelity-Training».
46   See, Reader, T. W., & Gillespie, A., «Developing a battery of measures for unobtrusive indicators of organisational culture: a research note», in Journal of Risk Research, 2022, and LSE Blogs, Reader, T., & Gillespie, A., «Developing a tool to understand corporate culture from the outside», 2017.

37. Use nudges to complement traditional methods of risk management. This alternative approach rooted in behavioral psychology involves understanding the contextual drivers of human behaviors and introducing small changes, or «nudges,» to eliminate misconduct at the source.[47]

38. Zero tolerance. Human misconduct can result in immediate construction site bans and, in cases where it endangers others, could escalate to legal action.

4   Conduct Risk Methodology Observations

Given the number and variety of approaches, there are, in my opinion, five conclusions and trends that should be taken into account:

First, the importance of discussing the theoretical underpinnings of conduct risk methodologies. Conduct risk methodologies are built on diverse theoretical foundations, including Anthropology, Behavioral Science[48], Ergonomics[49], Psychology, Psychotherapy[50], Sociology[51], and Systems Science[52]. While interconnected in various ways, each of these fields focuses on different aspects of human behavior, societies, and systems. Informed methodological choices require a comprehensive understanding of the characteristics and underlying premises of these foundational theories.

Second, the advantages of mixed-methods approaches. Given the diverse theoretical bases and the methodologies they inspire, adopting a mixed-method approach is highly recommended.

Third, the need to identify transferable methodological parts. In the past years, cross-sector conduct risk knowledge sharing has been accelerating.[53] Fostering a multidisciplinary mindset is beneficial for identifying which methodological aspects can be applied to other professions, organizations, and industries.

Fourth, the importance of defining the strategic ambition level related to conduct risk. Any chosen conduct risk methodologies will be closely linked to a company's strategic ambition level, whether consciously decided or inadvertently shaped. The spectrum ranges from reactive, rigid, and binary approaches to an integrated, proactive mindset aimed at engraining conduct risk into all operational processes of an organization.

Fifth and last, the acknowledgement that theory-based approaches remain essential. There is a prevailing consensus that conduct risk methodologies will continue to evolve alongside the emergence of unstructured data and powerful algorithms extracting insights. Theory-based approaches remain essential for guiding the search within data, generating predictive insights, and identifying patterns to uncover root causes and potential solutions.

5   Conclusion

As the importance of conduct risk continues to evolve, boards must address a number of critical questions such as:

- What is our strategic ambition regarding culture and conduct risk?

- Which conduct risk methodologies do we currently employ? Are we aware of the advantages and disadvantages of these approaches?

- Are there specific methodologies that we choose not to adopt?

- What insights can we draw from other industries regarding best practices?

- Do we incorporate data-driven approaches in our conduct risk efforts?

- Are we acknowledging the impact of human behavior on our financial results?

All of the above questions should feature prominently on the board agenda and need to be discussed regularly, using effective measures to track progress.

47   See, Scholten et al., «A Better Approach to Avoiding Misconduct», in Harvard Business Review, May-June 2022.

48   See, e.g., «Behavioral Scientist», a nonprofit digital and print magazine offering expert commentary from the front lines of behavioral science.

49   See, e.g., International Ergonomics & Human Factors Association IEA.

50   See, e.g., in German only, Milton-Erickson-Institut Heidelberg and Simon Weber Friends swf.

51   See, e.g., Metaplan.

52   See, e.g., MIT Management Sloan School's systems dynamics and systems thinking courses, and the Centre for Systems Studies at the University of Hull, UK.

53   For example, experts from high-stakes industries such as shipping and aviation are sharing their methodologies with other sectors, see, e.g., Pilot Impuls, and, in German only, Human Factors Hamburg.