Human factors in financial trading

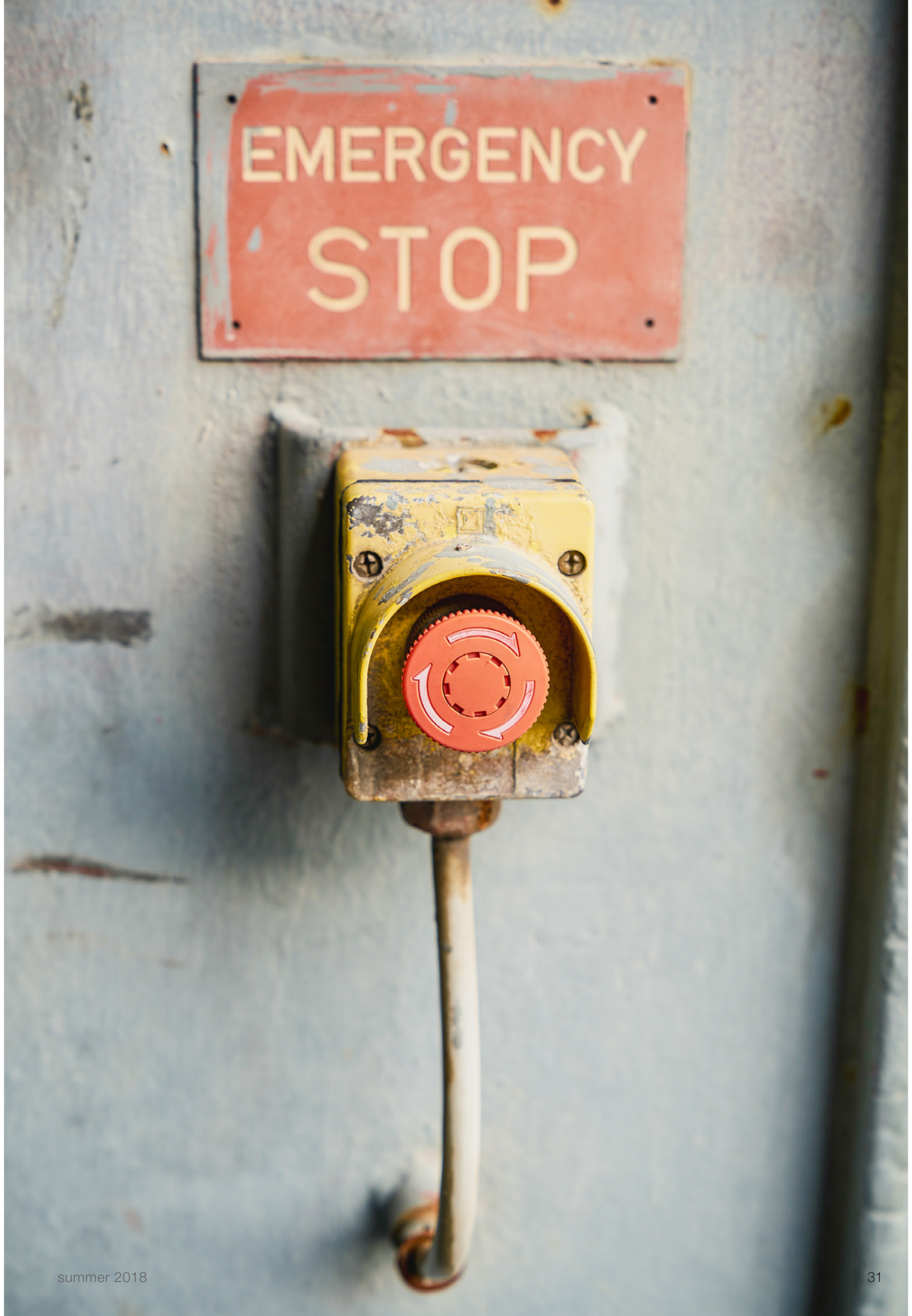
Meghan Leaver highlights the importance of human factors in risk management

The recent financial crisis was economically and socially destabilizing: millions of jobs and billions of pounds of household income were lost, resulting in pervasive unemployment, inequality and destabilizing global economies (Barr et al., 2012). The financial failure exhibited complex organizational properties, such as tight coupling (e.g. the bankruptcy of Lehman Brothers triggering the collapse of other key organizations), the prioritization of production over safety (e.g. profit over the welfare of stakeholders) and a collective inaction to heed early warning signs (e.g. credit derivative swaps and mortgage-backed securities).

Following the crisis, regulatory reactions generated various interventions aimed at improving risk management such as the mining of large amounts of trade data (e.g. for portfolio compression and reconciliation); third-party trade matching (e.g. a third party matches the trades between two counterparts to ensure all trades are booked into the individual organization's portfolios); the emergence of targeted corporate governance codes (e.g. the Bank of England Senior Management Regime, SMR); new areas of work driven by legislation such as Basel II, MFID and EMIR (e.g. operational compliance teams); and a more central role for the Financial Conduct Authority (UK). While the aims of increasing regulation of the financial services (e.g. promoting transparency, predictability and a reduction in acts of misconduct) may lead to a short-term adjustment of organizational behaviours and practices (e.g. new operating procedures, creation of oversight teams and dedicated whistle-blower posts), the solutions are superficial and do not target the deeper-held beliefs and organizational factors that support and promote the behaviours and practices that lead to error.

Recent research in the financial sector has adopted human factors approaches to extract and synthesize critical information on how the behaviours and practices (e.g. systemic rate rigging) within the industry eroded risk management processes. Such research has generated meaningful insight into how risk is managed and produced concrete findings on the nature and consequence of human factors problems in financial trading (e.g. errors, skill gaps, resources) that underpin them (Power et al., 2013; Ring et al., 2016; Leaver and Reader, 2015; 2016). In the scope of this research, human factors are considered aspects of human performance and system design that contribute to problems in managing risk in financial trading. The development and application of a novel tool for collecting and analysing operational incidents in financial trading – the Financial Incident Analysis Systems (FINANS) – has led to a deeper understanding of the skills (e.g. gather and codify complex sets of data) and competencies (e.g. ability to maintain situation awareness during this complex activity) that underpin error in the financial services. For instance, findings from the application of FINANS identifies the rate of error in trading (approximately 1 per cent), reveals a broad description of the skills that underpin error (e.g. slip/lapse, human computer interaction) and reveals that the skills that help the organization overcome error are rooted in the social system (e.g. teamwork and situation awareness) (Leaver and Reader, 2016). This research importantly serves to challenge current conceptualizations of financial trading as 'individualized' and counters narratives focusing on traders who are unethical 'rule breakers'. Instead, it emphasizes the value of a systemic approach, whereby human factors approaches are used to explain why risky behaviours in financial trading occur. A systems-based approach acknowledges that failures are not necessarily down to one individual but reflect broader social and cognitive problems (e.g. lapses in human vigilance due to working conditions) and poorly designed systems. This approach has been successfully applied in other high risk domains such as aviation, military, rail and increasingly in the provision of healthcare. A systemic approach seeks to identify situations or factors that give rise to human error, and design and implement changes to the underlying system in order to reduce the occurrence of errors or minimize their impact on risk and safety outcomes. The application of a systems approach has important implications of the future risk management and regulation of financial trading.

The application of FINANS more broadly has important implications for the future regulation of the financial services. For example, the wider application of FINANS could be used to facilitate the benchmarking and assessment of other financial services firms industry-wide, similarly to how incident collection is done across other high risk industries such as aviation and healthcare. As it stands, we currently do not have a good understanding of how the cultures within these firms differ, and we cannot empirically evidence what good or bad performance looks like relative to performance and activity. Expanding the application of FINANS would help to establish what is 'normal' across the industry and to describe the profiles of what goes wrong within and across firms. For example, rolling out the system to assess other firms of generalizable size and structure would help to determine a typology of error within the financial services more broadly. Additionally, the use of



FINANS over time within participating organizations could lead to the establishment of longitudinal trends, which could then be triangulated with other data (such as market volatility and other market data) to ascertain whether the risk profile of the organization fluctuates in sync with the market. Moreover, we could analyse if there is a relationship between, and the impact of, risk profile changes (e.g. an increase or decrease in risky behaviours and perceptions of risk) as a result of specific organizational changes, such as management turnover.

Furthermore, future regulation might assess how the offending organizations would perform using FINANS. Following the previous point about extending the use of FINANS across the industry in order to generate meaningful benchmarking abilities and the sharing of lessons learned, FINANS outcomes in these organizations could be triangulated with data from safety culture measurement. Safety culture theory is used to examine how the organizational environment shapes the way people behave and think in relation to risk and provides a rich understanding of how social environments directly influence risk practices and problems in safety culture often underlie mishaps within other high risk domains (e.g. aviation, healthcare, energy). Recent literature demonstrates that safety culture shapes how operators behave and think in relation to risk, and this is central to understanding the conditions under which risk in financial trading can be effectively managed. Although financial trading is not a safety-critical industry, mishaps are hugely damaging for organizations and economies, and their causes (e.g. managerial pressure to show profit, out-of-date procedures) are similar to those in other high risk industries (Leaver and Reader, 2017).

Safety culture research would aim to answer questions such as: do organizations with a more positive safety culture report less critical incidents (e.g. failures)? Do they report more near-misses? What do the features of the incidents look like within these organizations (e.g. broad descriptions of human factors)? Are these features shared across the industry? At a practical level, this research would provide a holistic description of the state of safety across the industry, detailing granular details of the skills needed to ensure safety as well as the environmental factors (e.g. management commitment to safety, the ability to speak up) that support ethical behaviours. At the theoretical level, this research would be informative for future iterations of error research and regulatory frameworks (e.g. industry-wide frameworks, benchmarking).

REFERENCES

Barr, B., Taylor-Robinson, D., Scott-Samuel, A., McKee, M. and Stuckler, D. (2012) 'Suicides associated with the 2008–10 economic recession in England: time trend analysis', BMJ 345 (e5142).

Leaver, M. and Reader, T. (2017) 'Safety culture in financial trading: an analysis of trading misconduct investigations', Journal of Business Ethics 22 (2): 1–21.

Leaver, M. and Reader, T. (2016) 'Human factors in financial trading: an analysis of trading incidents', Human Factors 58 (6): 814–32.

Leaver, M. and Reader, T. (2015) 'Non-technical skills for managing risk and performance in financial trading', Journal of Risk Research 19 (6): 687–721.

Power, M., Ashby, S. and Palermo, T. (2013). Risk culture in financial organisations. a research report. *http://www.lse.ac.uk/accounting/Assets/CARR/documents/Risk-Culture-in-Financial-Organisations/Final-Risk-Culture-Report.pdf* (last accessed 19 April 2018).

Ring, P. J., Bryce, C., McKinney, R. and Webb, R. (2016) 'Taking notice of risk culture–the regulator's approach', Journal of Risk Research 19 (3): 364–87.

AUTHOR

Meghan Leaver is post-doctoral researcher in the Nuffield Department of Medicine, University of Oxford.