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Risk management for a new era: Mykhailo Rushkovskyi on why risk professionals need to help businesses adapt to the new reality in an age of decentralisation

The deep learning revolution: latest AI tools explained / **Through a glass darkly:** blinded by standards and best practice / **The road ahead:** IRM's global threat predictions for 2023 / **Taking control of operational risk:** big catastrophes provide much-needed insight

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Risk management for a new era

BY ARTHUR PIPER

Russia's invasion of Ukraine has not just brought war to Europe, it has upended both the global energy industry and risk management practice. Mykhailo Rushkovskyi says risk professionals need to help businesses adapt to the new reality in an age of decentralisation

It may seem unbelievable now, but oil dropped to around minus $37 a barrel back in April 2020. A mixture of low consumption during some of the worst days of the COVID-19 outbreak and a subsequent lack of storage at traditional facilities meant there was nowhere to put scheduled deliveries. The US benchmark price known as the West Texas Intermediate slumped from $18 a barrel on Monday 20 April, dropped into single digits, before crashing through zero as producers paid customers to take the excess off their hands.

At the time of writing, crude spot price on the index is bumping along in the mid-to-high 70s – although there is some volatility that has seen values drop lower. The Russia's war in Ukraine has not only affected prices though. Perhaps more importantly for the coming decade, it has uncovered long-standing structural problems in the global energy sector, says Mykhailo Rushkovskyi, Head of research and analysis at Kyiv Consulting, PhD researcher in risk management and founder of the Runderc, the internet portal for risk managers.

Power problems

"There is no doubt that the challenges predicted in the energy sector during the past few years have been partially realised," he says, speaking from his office in Kyiv, Ukraine – and not just because of the war. Just before Christmas, for example, much of the US was gripped by artic conditions that left about two million people without heat or light. Power outages throughout the region increased as people tried to keep warm at the same time as freezing conditions damaged infrastructure. The incident has not been the only extreme weather event in recent years to batter energy networks.

The problem, according to Rushkovskyi, is that centralised networks coupled with power plants powered by coal, gas, nuclear or renewable resources have little redundancy built into them. "Once you have damage to this specific power

“It would be more rational to have decentralised systems and smart grids


Image credit: Main Directorate of the State Emergency Service of Ukraine in Kharkiv Oblast

Fire at an energy infrastructure facility after Russian shelling

grid that connects the producer and consumer, we experience blackouts on a scale of 10-15 minutes, or even days depending on the situation," he says.

The second strand of the problem is how the energy system retains its equilibrium between suppliers and consumers. Normally, supply and demand are balanced so that ups and downs within the system can be tweaked as necessary. That works fine until there is disruption. Up until February 2022, for example, Ukraine was synchronised with Russia and Belarus in a single energy system. A few hours before the Russian invasion, NEC Ukrenergo (the country's electricity operator) disconnected Ukraine's power system from Russia and Belarus to undergo testing before joining ENTSO-E – Europe's equivalent. After several weeks of isolation, Ukraine managed to complete physical operations to connect its power system with the European energy network. But nationwide, power outages have continued as Russia continues to target Ukraine's energy infrastructure.

> **Do not be someone who is still living in 2019 – we are done with that**

Rushkovskyi believes that while making this move to use European energy system was essential, it leaves a faulty structure in place. Ukraine and developing countries and regions would be better served by a less monolithic, more regional approach. "If you instal power grids along a whole continent, for example, it requires a huge amount of investment with inbuilt weaknesses to natural events or man-made catastrophes," he says. "It would be more rational to have decentralised systems and smart grids. That is what we are now doing in Ukraine – creating a parallel, independent energy production system – a more decentralised network."

Fragmented world

In fact, it is not just war and natural catastrophes driving this change – but since the 2020 COVID-19 global lockdowns the world has become more fragmented. The emergence of China as a super-power economy and the geopolitical tensions that this event is creating have further disrupted global ties, trade and logistics. In addition, Brexit, tensions between the old and new Eastern European political allegiances and shifting power balances in the Middle East are all indicators that regionalism is on the rise in a reshaping global world.

"Do not be someone who

> **You can use such local, modular reactors to generate enough power for half a city and establish production absolutely independently from any national grid**

is still living in 2019 – we are done with that," he says. "The regionalisation we are facing is likely to last a minimum of ten years, but we should use this decentralisation wisely."

That brings our conversation back to the practicalities of energy production and supply. Ukraine has been learning the hard way about the benefits of decentralisation. There are planned power outages most days, but many organisations have installed small generators – around 5 kilowatts for a coffee shop – that can make the business totally independent from the overall energy network. "Once there is a blackout, they switch on their own power generator – and you can drink your cappuccino without interruption," he says. The locals joke that while you can sit without a light in Kyiv, you can always drink a good coffee. In fact, part-way through our call the lights do go out on our online video conference at Rushkovskyi's end until the reserve power kicks back in around 10 seconds later.

Hybrid and decentralised

In effect, what he is suggesting is a hybrid system where customers benefit from the centralised system, but they also have the capability to be independent if they need or chose to be so. At his apartment, for example, he has built up energy storage facilities with solar panels compatibility. "Your backup plan includes independent generation and independent storage – a solution that brings the necessary level of energy supply resilience."

He says that this approach paves the way for introducing more renewables into the energy system – but with realistic alternatives if power outages are likely to be long and unpredictable. For example, solar panels and wind turbines (together with appropriate storage facilities) could be combined with local diesel generators so that the later can make up for any shortfalls. Small neighbourhoods could join together depending on their capabilities and needs. But when things go wrong, there would still be energy countrywide.

That does not mean that over the coming decade existing energy companies will cease to be the major suppliers of energy, but he believes that adding more diversity to the mix of sources – from renewables to nuclear is on the way. In fact, he describes himself as a supporter of nuclear power. In 2020, Ukraine was the seventh biggest generator of energy from that source in the world, with fifteen active reactors. In November 2022, the US and Ukraine announced that they would work together to build a small modular nuclear reactor in the west of the country. The pilot project aims to test whether it is possible to bring electricity to rural areas with lower-grade power grids, especially in places where it would not be cost-effective to construct a full-scale plant.

"You can use such local, modular reactors to generate enough power for half a city and establish production absolutely independently from any national grid," he says. "That can be the basis for helping develop those regions, to move gradually to renewables with wind, solar and other biofuels. You need to provide the necessary levels of physical and IT security, but it could work not just in Ukraine but in developing countries too."

Risk management

Rushkovskyi switches easily from the big picture to specific, practical and pragmatic solutions – he is both a risk manager and a PhD candidate at Taras Shevchenko National University of Kyiv. He was also winner of the European Risk Management Awards 2022. While he sees risk management being able to play a "super-critical" role in helping businesses transition to a more resilient energy infrastructure, he believes that many have not yet caught up with the large risk events that have shaken the certainties of a globalised world over the past three or four years.

When Russia was hit with sanctions back in 2014, he says that many European businesses were slow to cut ties with the affected suppliers. When they did begin to make the switch, instead of thinking about diversifying their supply chains to future-proof their businesses many simply looked for a single source to replace Russian gas – liquified natural gas (LNG).

"LNG makes sense," he says, "but it is not a magic bullet. "We cannot go from one extreme to another – relying on one source for 50 per cent of our energy, to a different one at the same level." He says it is an open question whether there is enough production capacity globally to meet Europe's needs on such a scale – and the infrastructure investment required is huge. In fact, the potential difficulties of such a strategy were highlighted last year. Freeport LNG in Texas was supplying Europe with about 10 per cent of their supply by June 2022 when it shut down because of an explosion at the plant. The gas is only just beginning to flow again. In addition, the pandemic showed how vulnerable supply chains could be when dock workers were furloughed or sick for months on end.

"If we see a good opportunity, the danger is that we may blindly follow it," he says. "Every strategic shift, any big project includes risks that sit beside the opportunities, which is why it is super crucial for risk management to step in."

Business focused

Rushkovskyi believes that risk management needs to be well-positioned in the governance structure within organisations. The old-style, second line of defence – where the function sits between line management and internal assurance – can degenerate into quarterly box-ticking exercises if organisations are not careful. While it is important to carry out such day-to-day monitoring, the responsibility for who owns risk is key, he believes.

"If the responsibility does not sit at the top level of the organisation, risk management does not work properly – this is true for international organisations, governments and enterprises alike," he says. "No responsibility equals no results."

The simplest way to make such responsibility stick is to link a risk to a specific financial indicator and find someone high up in the organisation who is willing and able to take it on. That can be a supervisory board, for example, or a chief financial officer – but it must be someone who is genuinely interested in and responsible for mitigating the risk and whose bonus, for instance, depends on them doing so. He makes a distinction between risk and compliance in this respect. While compliance comes from regulations, it can be back-ward looking and is generally imposed from above or outside the organisation. Responsibility, on the other hand, must come from the bottom.

"We need to start from this type of practical, bottom-up approach," he says. "Regulation is top down – but the real interest, the real risk owners and the people who are mitigating the risk are a few levels below; so the interest for mitigating the risk must also be there."

Risk management 2.0

For that to work well, and here we are getting into the crux of his PhD research, risk management must speak the language of the business. It is an approach he calls Risk Management 2.0 – see, *three pillars of risk management 2.0*. It is not enough to tell a chief sales officer, for example, that they must both hit their annual sales target and mitigate a key risk. That could create a moral hazard because the risk mitigation could simply involve ticking boxes so that the sales executive can focus most effort on hitting their sales target. Instead, the risk manager must be able to show and demonstrate that not dealing with the risk could derail efforts to achieve sales. In other words, the risk must pose a concrete threat to the person mitigating it.

"You always need to translate risk management language into the business' own language," he says. "Once you make this translation work, you have found the key to relevant risk management."

The biggest blocker to taking this approach is usually internal corporate culture, especially when organisations are driven only by extremely ambitious financial goals that take too little account of risk. "Fancy goals create a sort of tunnel vision," he says. While this may work well in the short-term, the view assumes that the past is a good measure of the future. Those who do not appreciate how far the world has moved since 2019 are likely to be hit hardest when

> **"You always need to translate risk management language into the business' own language**

THREE PILLARS OF RISK MANAGEMENT 2.0

- **Pillar one:** traditional second line of defence risk management with its formal standards and practices.
- **Pillar two:** adequate insurance. If real, catastrophic risk is on the rise that cannot be mitigated, organisation should purchase tailored coverage for the businesses specific risk exposures. (The risk of not taking the bespoke route is that organisations have general insurance that is does not fully mitigate potential losses and each year the premiums increase.)
- **Pillar three:** risk management becomes an internal consultant. This is something that businesses can achieve when they reach a certain level of maturity. It requires a very competent team of open-minded, curious risk professionals. Such a team can see the whole risk landscape – inside and out – and provide a service to rival large consultancies but at a fraction of the cost. "Because you are already in-house, you know precisely how recommendations can be implemented and what the likely pitfalls will be," Rushkovskyi says.

risks inevitably hit home. A second stumbling block to achieving the benefits of risk management 2.0 are those who focus on too much detail and mire projects in processes and procedures.

Rushkovskyi's holistic, pragmatic philosophy has come from a career working in risk – initially in reinsurance at Marsh Europe, then at Generali as a risk's underwriter – which was when he also sat for an MBA at MIB School of Management in Trieste, Italy. After a stint at Allianz, where he was employed as chief risk officer, he moved into setting up enterprise risk management at organisations where he had the freedom to start with a clean state – Naftogaz of Ukraine, the largest national oil and gas company, and then DTEK – the largest privately owned energy holding in Ukraine. He says it was then that he realised that risk management systems had to be carefully tailored to the specific needs of an organisation and communicated in a way that chimed with those responsible for mitigating it. "It was a case of learning by doing and doing by trying," he says. "When we started to see good results and understanding, I thought we could perhaps standardise our approach – which is the goal of my PhD." He has submitted the document now and it is going through the final stages of assessment at Taras Shevchenko National University of Kyiv.

While the thesis draws on the larger geopolitical and economic trends for its background, his aim is for risk professionals to take whichever parts of how work they find practical, adjust it to their enterprise and put it into action. "You should be able to run risk management through any system and end up with better operational efficiency, fewer costs and many other things," he says. "It should allow you to take a holistic view of any area of the company – not just the details, but the bigger challenges. Risk management 2.0 is as simple as that."