
HAND IN HAND





The Fourth Industrial Revolution is all about artificial intelligence and big data - including machine learning. These new technologies are affecting many areas of business, and corporate finance is no exception. Marc Mullen looks at how AI is changing the role of advisers - and at how human judgement will always be at the heart of successful deals

In movies, the artificial intelligence (AI) future is always depicted as dystopian, generally involving an android and a submissive human fighting against the odds to survive. In reality, however, humans are already working with AI for better outcomes, which is why corporate financiers are beginning to adopt such technology. That's not exactly a great narrative for a money-spinning Hollywood blockbuster.

"Professional services are the last industrial-scale artisans in the economy, providing bespoke work on a large scale, sometimes using old-fashioned approaches," says PwC UK AI leader, Euan Cameron. "Lots of other industries have been through the revolution already, and in some respects, we're just embarking on that journey. This is a process that takes place over time, not a one-off event. Once the toothpaste is out of the tube, you can't put it back in."

Due diligence is central to de-risking of M&A. It is the most resource-intensive part of the transaction process. So, in many ways it is the first place to start when looking for efficiencies that can be gained by successful deployment of AI. "AI, big data, machine learning - between them they allow many different



types of intervention that will make different parts of the deal value chain more efficient, faster and more accurate,” explains Cameron. “AI is very good at some tasks, and not others. Human roles have a range of different tasks which require the balancing of different skills. It’s not like manufacturing. Automation is likely to remove the more repetitive, less motivating tasks within a role, but not the role.”

STEP BY STEP

Dentons corporate partner Joe Altendorff asks: “Do I think the world will be a very different place when I’m in my mid-50s, looking back at a career in corporate finance? Yes, surely in the same way more senior partners who started practicing in the late 1980s must do now. We’ve have seen a huge level of technological change in that period. We have gone from no computers on desks to computers in the form of smartphones in everyone’s pockets. And what’s more, those computers are more powerful than the mainframe computers that were used in the City back then.”

Altendorff hopes AI will remove the grunt work, and free human brains – which he believes are still the most sophisticated forms of intelligence on the planet – for more challenging, less mundane tasks. “Tech has yet to deliver the leisure time we hoped it might. It would be great if it did,” he says.



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Euan Cameron,
UK AI leader, PWC

“There are numerous labour-saving devices, but most of us still have to work a nine-to-five (at least). In the coming years there will be a fundamental shift in the way tech augments corporate finance practice, but I don’t see tech as the death knell for human minds that some might fear.” Deal advisory workflows are changing. Relevant information should come out faster, enabling focus in the right areas at an earlier stage.

Altendorff says Dentons is using AI tools in due diligence to augment human intelligence. He was instrumental in Dentons adopting the use of Luminance AI – an AI platform for the legal profession – and machine learning software (which was part developed by Slaughter & May).

Dentons is taking a multifaceted approach – both in its use of tech and also through its legaltech innovation fund, NextLaw Ventures, through which it is co-investing in AI and machine learning software for legal services. “Frustrated by the lack of legaltech investment, we set up our own fund and invited individuals and organisations to co-invest,” says Altendorff.

THE ORIGINATION GAME

Improved due diligence efficiency will affect the approach of buy- and sell-side lead advisers. Because of the time saved, you will be able to have

a larger number of prospects in the frame for longer, or alternatively eliminate them based on more comprehensive assessment sooner, be that target or potential acquirer. This helps de-risk the process, and potentially saves time, money and effort.

'Horizon setting' is an area of AI development in deal origination. Parameters are set and software looks rapidly across a market, often at pretty unstructured information from a wide range of sources, to spot potential opportunities.

"The idea is you can keep these tools looking in the background and they flag up pertinent opportunities," says Deloitte's director of AI, Dr Matthew Howard. "It allows you to keep more options open. It's likely that this technology will enter the market very soon." As the technology matures and gets more flexible, Howard expects a greater impact in origination.

In buy-outs, one important element is the private equity backer's assessment of the management team. Can the mathematical models underpinning AI - based on probabilities, statistics, historical behaviour and data - replicate that? "We are a long way from that," says Howard. "It's analogous to medicine. A physician can make a prediction based on historical data, but will also make series of assessments about the patient that are nothing to do with the data on the page - how the patient presents and speaks, walks and talks. A lot of that cannot be replaced by AI."

And fundraising? To an extent, crowdfunding platforms have already disrupted that market for smaller businesses, particularly those with a retail customer base. There are also tech platforms that are providing 'paint-by-numbers' legal advice. Howard adds: "At present, neither of those can provide the same level of structuring or analysis that one receives from a professional corporate finance adviser, accountant or lawyer. Tech advances could make that possible further through the growth cycle, but I see there always being a place for human advice."

NEED TO INVEST

The government launched the Next Generation Services pioneer programme in 2017 as part of its industrial strategy. Applications to the £20m fund ended in 2018. But EY's chief innovation officer Jan Chan says: "Amazon invested £8bn last month on research and development. £20m is less than they spend in an hour."

He says the UK will get the best bang for its buck, if big and small UK organisations are given easy access to open and complete information - granular

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THE AI SECTOR DEAL



In May 2018, Greg Clark, the then-business secretary,

announced the launch of the AI 'sector deal' - as part of the industrial strategy. Its aim was to take "immediate, tangible actions" to advance AI and a data-driven economy in the UK. Part of this was the launch of the Office for Artificial Intelligence (OAI), to provide a link between government departments, R&D and innovative business.

Dr Rannia Leontaridi OBE (pictured) has worked on government policy for 16 years, most recently focusing on growth businesses. She became co-director of the OAI this year, and contributed to the Corporate Finance Faculty's *AI in Corporate Advisory* report (see 'AI and the \$4trn prize').

At the launch, she said: "The report recommends collaboration between professional services and tech developers be stepped up, as this will drive adoption. I agree - our goal in government is to make sure we are leading from the front in the safe and ethical adoption of AI.

"This report is timely. Many of its recommendations are being

actively studied across government departments."

At the launch of the sector deal 18 months ago, the government committed to getting R&D investment (private as well as public) up to the OECD average of 2.4% of GDP by 2027. Many things could happen to derail that plan by then, but it is a pledge (see icaew.com/boostingfinance).

Clark announced a series of new innovation grants as part of the Industrial Strategy Challenge Fund - a £4.7bn pot of public money to be invested over four years in R&D to strengthen UK science and businesses.

Leontaridi said £1bn had been committed so far through the first two waves. The latest tranche will go to project proposals enabling increased access to data within the accountancy, insurance and legal sectors, with £3.5m being allocated to fund R&D in responsible data access or sharing methods. Workshops will also be held, and any project conceived there could apply for a grant of up to £1.5m.

"This is only the start of the UK's plans to be recognised as a place ingenuity and entrepreneurship can flourish," she said.



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economic data, geo-location data, Land Registry information, specific data around government assets, historical weather records, and demographics.

"For the UK to really benefit from the efficient use of AI, it cannot just chase a few individual initiatives, but must create a platform where AI developers can access data in a free, easy way without infringing privacy," says Chan.

The big advisory firms undoubtedly have significant amounts to invest in tech. Collaboration is vital, argues Chan, who says EY is working in partnerships with global tech giants. "However, we wish to retain the IP within our own organisation. That's a balancing act we have to manage."

Investment in AI includes investing in education, in universities, and exciting people about going into the AI field, says Howard. "I still don't think the UK can hold a candle to the US when it comes to commercialising tech," he adds. "In the US, you can



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AI AND THE \$4trn PRIZE



ICAEW and Drooms have published *AI in Corporate Advisory*, the first report of its kind to assess how

AI-based technologies could transform the \$4trn annual global market for M&A. This white paper looks at how these technologies will augment existing approaches to transactions, enabling organisations to increase their success factors.

The report assesses how AI could change the deal process, practice development, public policy, regulation and career development for companies, advisers and investors. It was based on extensive research by the Corporate Finance Faculty and interviews with AI and corporate advisory experts.

Shaun Beaney (right), co-authored the white paper with Rosanna Woods, UK managing

director of Drooms. It was then discussed at a major conference at Chartered Accountants' Hall on 3 July. The faculty also convened an Expert Consultative Group, chaired by Lord Clement-Jones CBE, the leading parliamentarian on AI and a member of the faculty board, to advise on the research.

Beaney argues that professional judgement will become more, not less, important in the age of AI – not least because comprehensive, multi-layered analysis can produce complex results, which require careful interpretation.

The report recommends that countries such as the UK need to increase public and private investment in the competitive global AI market. Collaboration between professional services firms and technology developers should be stepped up.

The report can be downloaded at icaew.com/AICA



fail 26 times, and it's a badge of honour. In the UK, fail once and you might not get another chance."

And because AI is changing and will further change our work processes, Chan says the CVs they are looking for need to adapt with this: "We need people who have the potential to modify their skills, so that when we get to the future, whatever that ends up being, they can fit the new model. Investing in tech skills and hiring relevant people is crucial to ensuring we have the capability to develop the tools we can use going forward."

Data scientists are in demand across the economy, but are in short supply. "To attract the best people, we need to create the right environment, contracts and community, as well as the right training and ability to experiment," says Cameron. "The foothills are hard enough, let alone high mountains, so we need sherpas. We cannot just rely on our existing talent."

Security around AI is another important issue that needs to be addressed. While there is a lot of legislation already in place in some countries, a worry is that some smaller organisations will not be able to keep pace with changing regulation around bigger and bigger data. But, explains Howard, we should not regard AI ethics and regulation in isolation: "If it's the wrong thing to do, it's the wrong thing to do regardless of whether it's done with AI or not."

"We need to take the existing ethical framework of the business and pressure test it to make sure it also works when you add an AI component to it. There are so many tools – it would be like putting an ethical framework around presentation software."



QUALITY WINS

"I have made all sorts of predictions about the uptake of driverless cars, but the real world is harder to predict," says Chan. "In the corporate finance world, human beings trust other human beings to make important decisions. The advice we offer can be complex and requires a personal touch. AI provides enhancements and automation that speeds up the process. That enables us to give a better quality answer, and take a faster route to our insight."

And technology will not affect every role in the same way. "If you are a travelling salesman you spend 20% of your time driving and in traffic jams, 80% of your time selling stuff," says Cameron. "With an autonomous vehicle you could spend 'driving' time thinking about the next client. But if you're a taxi driver, autonomous vehicles are awful news - you do one task, and if the technology is successful it can do your entire job."

The Fourth Industrial Revolution is said to be building on the third, which was the digital revolution. Technologies are being fused together, and the lines between physical, digital and biological are being blurred. Vivienne Ming, executive chair and co-founder of Socos Labs, has said it should be embraced positively: "Instead of chasing that race to the bottom on labour costs, invest in turning your talent into a team of explorers who can solve amazing problems using AI as the tool that takes the busy work out. That's the company that wins in the end." ●



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"Feedback is invaluable for the effective training of systems"

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AI IN THE DATAROOM

Virtual data rooms (VDRs) - used in M&A transactions to manage and control online access to documents required during due diligence - are seeing perhaps the most significant application of AI and machine learning. Over the past 18 months, virtual data room provider Drooms launched Findings Manager, which uses AI-based technology to help professionals analyse and filter vast quantities of data much more quickly. A process known as 'auto allocation' sorts incoming documents into the right index points on the platform, helping speed up workflows.

"By applying the right technology, hundreds of thousands of documents can be read in a matter of seconds, leaving the relevant information ready for human review" explains Rosanna Woods, Drooms' UK managing director, and co-author of *AI in Corporate Advisory*. "It's important to make sure that the results can be tracked and validated with users. Aside from instilling an element of trust, feedback is invaluable for the effective training of systems."

The Findings Manager was developed by Drooms together with a number of leading law firms. "The professional input from the legal industry was key to its deployment," says Woods. The platform also has translation facilities, and heat maps showing the areas of the business that different bidders are interested in.

Crucial to its further development is understanding how advisers' workloads vary. "It's not just about meeting the needs of today, but also striving to innovate through market feedback and insights," she adds.

The use of AI and machine learning is still at a pretty basic level. Woods foresees that the next five to 10 years will see increased application of machine learning across a broader range of uses. The likes of predictive analytics together with data visualisation techniques will have an enormous impact on the sector. For now, it's about increasing efficiency. The future will see systems uncover knowledge from documents and link information to support users."

