



TECHNOLOGY

The AI revolution

Jack Gray explores how the pensions industry can harness emerging technologies to improve member outcomes and the potential impact of the EU AI Act

As the world continues to hurtle through the 21st century, technological advancements are showing no signs of slowing down. Digitisation and automation have been a mainstay across industries for decades, and the financial services sector is no different. However, the pensions industry has not always been the quickest to adopt emerging technologies, unlike other financial sectors like banking or private investing.

This is perhaps unsurprising: Pensions are long-term savings vehicles with vast amounts of legacy data, making new technologies harder to implement, while the workplace pensions space tends not to offer as many products as other financial services, amid stricter regulation and less financial incentive. However, emerging technologies can play a pivotal role in improving outcomes. Online dashboards, digitisation, and automation can drive efficiencies, data analysis, and member engagement. Artificial intelligence (AI) has been touted as a gamechanger for the pensions industry, helping drive these efficiencies and supporting members

through their retirement journeys.

“The governance structure of pension schemes provides an additional level of safety and ongoing fiduciary oversight, unlike most other areas in the economy where AI is being deployed,” notes PensionsEurope senior policy adviser, Thibault Paulet. “There are fewer AI use cases in our sector than in the others because pension funds are not selling financial products. However, AI is being used for the dialogue between pension funds and members and beneficiaries through chatbots and for asset management optimisation.” The European Union’s (EU) new AI regulation came into force on 1 August, requiring classification of AI systems based on their risk level and the application of risk management systems in ‘high-risk’ AI tools. As the industry increasingly adopts emerging technologies, these regulations have become more relevant.

Harnessing new tech

New technologies can be utilised across all steps of the pension saving journey, from in-house to member-facing

services. Insurance and Pension Denmark head of digital policy, Sigrid Floor Toft, says implementing AI can result in more precise results from mathematical models.

“The use of AI for predictive analytics will allow for more strategic financial planning and risk management, which will impact on the strategic decision-making capabilities,” she continues. “It can reduce the time employees spend on manual repetitive tasks. In the short term, we expect the largest AI uptake in case processing.”

The most widespread adoption is in customer services, Floor Toft says, particularly generative AI for advanced chatbots in the short term, and automated call handling and processing in the long term. “Generative AI is indeed a potential game-changer in the pensions and insurance industries, particularly due to its ability to create tailored content and provide personalised insights,” explains Prevet senior manager, Dejan Malesic.

“This technology’s application in these sectors is still in its early stages, but there are clear and compelling use cases that could reshape how pension funds and insurance companies operate.”

Drawing on various data sets, these applications include providing member advice through personalised retirement planning and dynamic risk profiling, and guiding members through benefit options and claims procedures. The industry has sought to improve communication and education approaches, adds Engage Smarter AI market strategy director, Andy Dickson, who states that making personalised guidance available to all pension scheme members, cost effectively, has been a “very real challenge” for providers and schemes. “The advent of AI could be the revolutionary solution to this perennial problem,” he says. “Conversational AI can be deployed to deliver support and guidance for members at key moments such as: Taking benefits, personalised nudging, processing transfers, fraud and scam detection. It can be accessible 24/7 every day of the year and offered at extremely low costs compared to offering access to call centre staff.”

Malesic highlights that emerging technologies can also support staff training and knowledge management and routine task automation. He states: “AI can quickly assimilate vast amounts of documentation, including pension regulations, plan rules, and jurisdiction-specific requirements. It can then assist officers by providing instant access to relevant information, helping them navigate complex legal and regulatory landscapes. AI can also handle routine queries from employers and members, freeing up human resources. Additionally, it can prepare

detailed reports by extracting and analysing data from member portfolios.”

Making an impact

One of the more impactful emerging technologies is likely to be generative AI, a tool that can generate text and other data using generative models and prompts. For the pensions industry, this could lead to more efficient, cost-effective, and accessible customer service, and improved decision-making processes. “In my view, generative AI will have the biggest impact in the following years,” says Malesic. “It represents a major step forward in AI technology. It holds the potential to transform the pensions and insurance industries by providing personalised advice, simplifying complex decision-making processes, and supporting administrators in their roles. As more providers recognise these benefits, the adoption curve is likely to steepen.”

Floor Toft adds that generative AI will likely bring additional opportunities due to its flexibility and scalability, which expands the range of potential applications with reduced development and integration costs. While generative AI will probably affect a smaller number of processes, as traditional AI is better suited to repetitive tasks, members

will likely experience a larger impact of generative AI. It can also assist pension professionals in making informed decisions by analysing trends, member behaviour, and market data, Malesic notes, alongside providing scenario analyses and recommendations to help optimise fund performance and meet regulatory requirements.

Conversational AI is also expected to make a significant impact, with a white paper from Engage Smarter predicting that conversational AI agents will become the industry standard for delivering financial guidance.

“This information revolution will transform the lives of the millions of financial services customers and pension scheme members who are currently excluded from receiving knowledgeable support and guidance,” notes Dickson.

New tech, new risks

As with anything new, emerging technologies bring with them emerging risks that the pensions industry will need to adapt to and account for swiftly to ensure their members and businesses are safe. Cyber risks are becoming more prevalent, with the European and Insurance Occupational Authority’s recent Risk Dashboard highlighting an increasing risk outlook for digitisation and cyber risks over the next 12 months.

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These risks can be seen in recent cyber attacks on Capita in the UK, whereby pension scheme members' personal details were accessed, and on SH Pension in Sweden, in which customer data was stolen.

Emerging technologies use member data to provide the services required, but this can leave them vulnerable to fraudsters. "AI is heavily reliant on data, so protection of that data is paramount," says Dickson.

"People are rightly concerned about the possible misuse of their personal information or its theft through cyber hacking. Transparency is vital in building trust with companies and end-users alike."

Floor Toft argues that there is an issue with the opacity of some AI models, which require more focus on explainability and transparency. "The use of data for AI applications also requires ethical considerations in some instances, particularly when using sensitive data," she continues. "Also, AI requires an increased focus on data quality and validity to be able to counter and mitigate potential bias." While accuracy is a key metric for traditional AI, Floor Toft highlights that traditional accuracy metrics are less viable for generative AI.

One "major concern" with emerging technologies is the fear of job displacement, Malesic adds, and there is a perception that, as technology becomes more capable, it will replace human workers. "I believe that while generative AI will not replace human expertise in every domain, it will create a significant competitive gap between those who adopt it and those who do not," he says. "The key will be for businesses and professionals to leverage generative AI to enhance their capabilities."

Malesic points to generative AI's ability to create fake documents, images and audio, which can be used to spread disinformation or impersonate individuals. "This could lead to a wide range of negative consequences, from damaging reputations to influencing public opinion," he says. "Addressing this risk will require robust verification tools and methods to distinguish between genuine and AI-generated content."

The EU AI Act

To try and minimise these potential risks, the EU's new AI regulation came into force in August. Under the new rules, AI systems' risk levels will need to be evaluated in accordance with the regulatory criteria, appropriate mitigation measures for 'high-risk' systems will need to be implemented, and ongoing compliance with General Data Protection Regulation (GDPR) will be required.

Floor Toft notes that it's difficult to say what impact the regulations will have on the industry at this stage, as it



is dependent on the implementation, and how the guidelines and standards will operate in practice.

"The comprehensive high-risk rules in the AI act are expected to affect only 5-15 per cent of all AI use," she notes. "While this is a relatively small number, we would still expect to see a spillover from the act, where AI users over time will deploy good practice solutions from the coming guidelines and standards underpinning the act."

While Floor Toft believes the balance between risk and requirements was largely achieved, the act could become a barrier to AI uptake if it becomes unbalanced.

Malesic argues that while AI has the potential to enhance decision making in the pensions sector, the 'high-risk' categorisation introduced by the EU AI Act and associated compliance requirements could pose "substantial challenges".

These challenges include regulatory compliance, explainability challenges, the potential impact on AI adoption, and data access and quality. "The compliance requirements could be particularly burdensome for smaller pension funds and providers, which might struggle with the resources needed to meet these obligations," Malesic says.

"The regulation may also require pension funds to provide greater access to the data used by AI systems, enabling individuals to review and potentially challenge the decisions made by these systems. Ensuring data quality is a critical aspect of this process."

However, Paulet argues it is unlikely AI pension use cases would be categorised as unacceptable and high-risk. "Those two categories come with specific stringent requirements," he says. "For AI use cases that would be categorised under

limited risk such as chatbots, some transparency requirements are imposed, while the AI act encourages the establishment of voluntary application of codes of conduct for minimal-risk AI use cases."

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