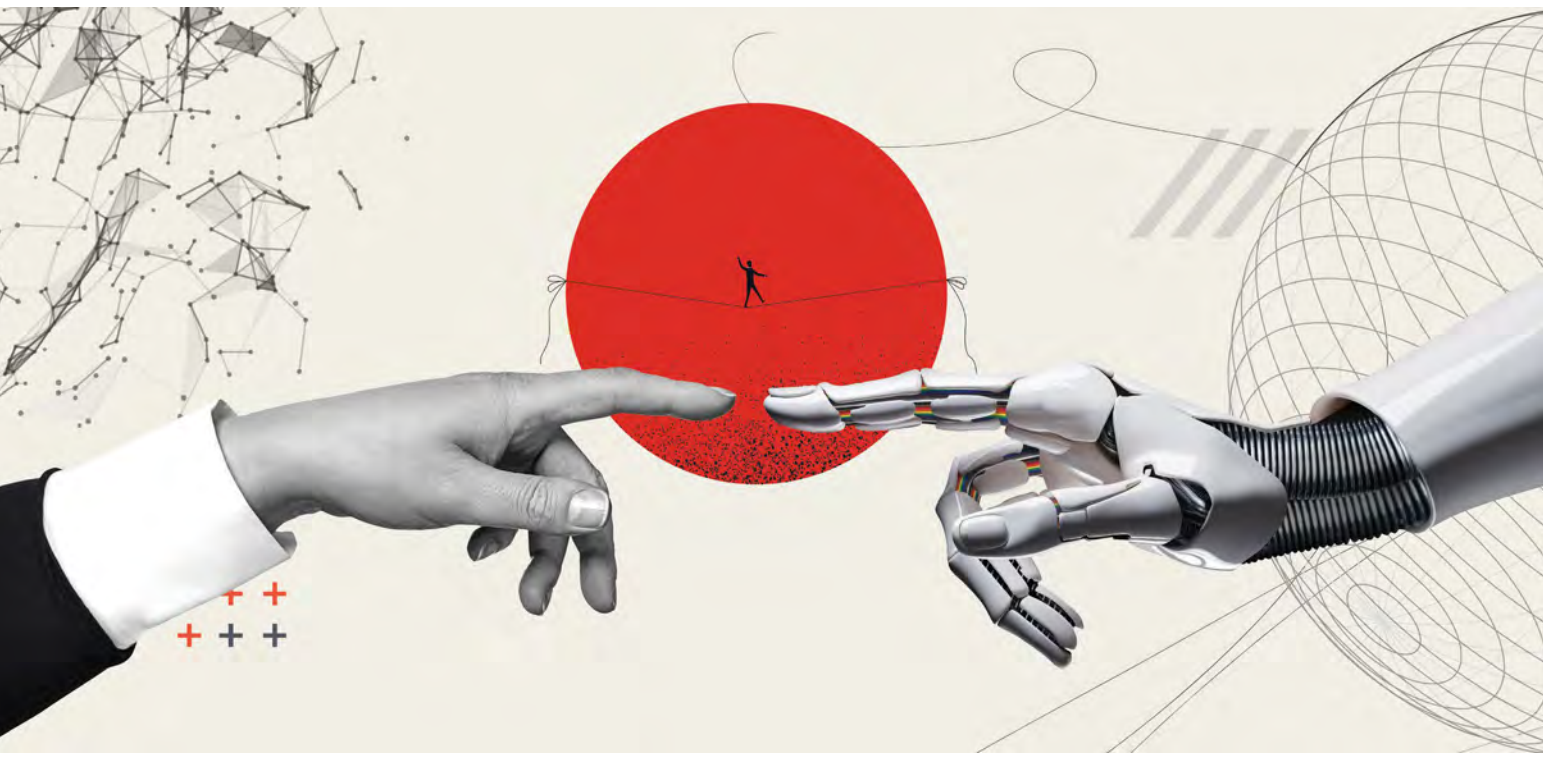


ARTIFICIAL INTELLIGENCE

# The digital tightrope

**Although approaches to AI in pensions vary across Europe, the industry is grappling with the same challenge – how to harness the technology's benefits while managing the risks associated with data, governance, and regulation.** Paige Perrin **reports**

Artificial Intelligence (AI) is no longer just a buzzword in the pensions industry – it is slowly becoming a practical tool for improving efficiency, member engagement, and operational decision-making. Yet adoption varies widely across Europe, and the industry is navigating a fine line between opportunity and risk.

Recent initiatives show why AI is becoming increasingly relevant. Dutch pension asset manager APG is piloting an AI tool that combines internal information sources to help employees quickly find answers without switching systems. Expected to be fully operational by the end of 2025, the tool aims to streamline administrative processes and reduce human error.

Meanwhile, Danish pension provider PFA has deployed an AI-powered prevention tool that has led to a 70 per cent reduction in long-term illness among pension members receiving early intervention. By helping healthcare professionals identify members at risk, this approach demonstrates AI's potential beyond administration, improving both health outcomes and financial security for members.

These practical applications coincide with the European Commission's (EC) targeted stakeholder consultation on the classification of AI systems as high-risk, part of the AI Act, underscoring why the

industry must act now to navigate both opportunities and regulatory challenges.

Although the act has been broadly welcomed by the industry, PensionsEurope and other industry bodies have voiced concerns, including that regulation should reflect the unique characteristics of occupational retirement institutions, particularly that a one-size-fits-all approach could create unnecessary burdens for smaller, more collective funds.

This moment also presents an opportunity to consider not only what AI can achieve but how its adoption raises important questions around transparency, accountability, and ethical use.

## Adoption

"AI adoption across the European pensions sector is at an early stage," says Actuarial Association of Europe (AAE) AI & data science working group co-vice chairperson, Jonas Hirz. "The most common applications are in customer interaction, sales support, automation, and other high-frequency tasks."

Finland offers a clear example of this adoption, as according to the Finnish Centre for Pensions (ETK) director of information management, Maarit Selin, in Finland's earnings-related pension sector, the adoption of AI is progressing in a "controlled manner" with the initial phase focusing on AI-powered productivity tools and strengthening data capabilities.

Elo chief technology officer, Juha Sivonen, explains that Elo has "long used" AI and advanced analytics across operations, including chatbots and several generative AI tools in production. Sivonen and Selin confirmed both organisations are using Copilot in their operations, with ETK stating they are using it for information retrieval.

The Swedish Pensions Agency has taken a similar structured approach, with five AI tools in operation, 10 in pilot, and 15 in planning phases. A dedicated AI group oversees strategy, infrastructure, legal compliance, and cross-agency collaboration, showing how authorities can integrate AI while balancing efficiency, transparency, and risk management.

In contrast, the UK is seeing AI adoption gain momentum more rapidly, as Pensions UK senior policy adviser, Olivia Sizeland, says: "Increasing numbers of schemes and other organisations within our sector are using AI to support with different areas of work."

In particular, Sizeland suggests that pension schemes across the country are experimenting with chatbots to improve member engagement, while AI is also being used to support administrative tasks, such as minute-taking – a growing necessity amid staff shortages.

Heywood head of products and propositions, Tim Carpenter, observes that many funds are moving from passive curiosity to active exploration.

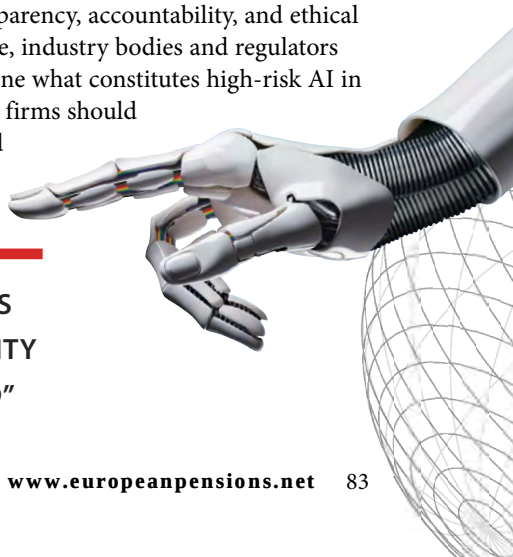
One area representing a "huge opportunity", Carpenter says, is member engagement. AI-powered tools can transform complex pension information into personalised, easy-to-understand formats, helping members better understand their benefits. He says that data from early implementations indicate that most members prefer digital communications, with only a small fraction requesting traditional paper statements.

Together, these examples illustrate the range of AI adoption in Europe: Some providers are prioritising controlled, supportive deployment, while others are experimenting more broadly to enhance efficiency and member experience. Predictive analytics, chatbots, and workflow automation are freeing staff from routine tasks, allowing them to focus on higher-value work.

However, Hirz notes that adoption in high-risk areas such as pricing remains cautious because of governance and legacy system constraints but emphasises that the overall trend is positive: "Nonetheless, momentum is growing, and the industry is preparing for broader AI integration as regulatory clarity improves, and technical foundations are strengthened".

## Challenges and risks

As AI adoption grows, pension providers are facing questions of transparency, accountability, and ethical use. Across Europe, industry bodies and regulators are seeking to define what constitutes high-risk AI in pensions and how firms should manage associated challenges.



**"NONETHELESS, MOMENTUM IS GROWING, AND THE INDUSTRY IS PREPARING FOR BROADER AI INTEGRATION AS REGULATORY CLARITY IMPROVES, AND TECHNICAL FOUNDATIONS ARE STRENGTHENED"**

The AAE recently responded to the EC's targeted stakeholder consultation on the classification of AI systems as high-risk, emphasising that areas such as annuity pricing and longevity modelling carry inherent risks.

Hirz explains that bias in pricing models, for example, can be "opaque and lead to exclusion of certain groups", such as members from lower-income regions if factors like postcode are used as proxies for socioeconomic status, life expectancy, or even ethnicity.

He notes that rigorous testing, validation, and human oversight are essential to prevent such outcomes, with actuaries playing a central role in ensuring models are fair, transparent, and compliant with the EU AI Act.

Concerns around "AI washing" – where providers overstate or misrepresent the use and benefits of AI – have also emerged. Danish fund Akademiker Pension, for instance, has urged Google to address the human rights impact of its AI technologies, highlighting the broader ethical responsibility of vendors as well as deployers.

On a more operational level, outdated technology adds another barrier.

"Legacy systems remain the most significant barrier to AI adoption in the pensions sector. They often lead to operational complexity, which makes it hard to get timely, validated data into AI workflows or to deploy models. Legacy constraints block end-to-end implementation and make progress far slower," Hirz says.

Sivonen agrees, explaining that while Elo has modernised much of its infrastructure, "often the challenge is that data is in old legacy systems and not available for AI solutions". Both stress that unlocking AI's potential requires up-to-date, well-structured data that can be accessed reliably.

Selin emphasises that AI must also comply with regulations, protect personal data, handle personal data securely, and be deployed only with appropriate oversight, while Sivonen adds that external AI services, often provided by American companies, require careful legal and contractual review, as well as robust internal governance frameworks.

Alongside legacy issues, data privacy and cyber-security remain central challenges. Generative AI in particular presents risks of "hallucination" or unintentional exposure of sensitive member information.

Across Europe, providers are investing in strong data governance frameworks, often building on existing Solvency II and General Data Protection Regulation (GDPR) standards, while also aligning with emerging regulations such as the Digital Operational Resilience Act (DORA) and the AI Act.

These challenges underline why regulatory clarity and consistent standards are becoming so important for the sector.

## Regulation and risk management

The EU's approaching AI Act is set to play a central role in shaping the sector, but questions remain about how it applies in practice.

Selin has raised concerns about unclear definitions in the act, including whether 'high-risk' applies to earnings-related pensions. She also warns that expanding regulation nationally to pension insurance decisions could stifle innovation, and questions whether companies using AI tools might be held to the same responsibility as developers.

Hirz, however, sees the emerging regulatory framework more positively. He argues that the AI Act, combined with established rules such as Solvency II and the General Data Protection Regulation (GDPR), provides a "solid foundation for harmonised rules" across borders.

He highlights the role of the European Insurance and Occupational Pensions Authority, which is working to promote consistency through initiatives such as its Consultative Expert Group on data use in insurance. Additionally, he points out that many firms are already strengthening their governance structures in anticipation of stricter rules.

"Newer frameworks such as DORA and the AI Act are currently leading to further professionalisation of data use, with many companies recently building up dedicated teams and executive roles that are responsible for this field," Hirz notes.

Looking ahead, most experts agree that AI in pensions remains in its infancy. Over the next three to five years, greater regulatory clarity is expected to accelerate adoption in practical areas such as risk modelling, fraud detection, and member engagement.

For pension providers, the future will not be about experimenting with AI as a novelty but embedding it as a core tool, but one that demands ongoing human oversight, ethical safeguards, and regulatory scrutiny.