

## SCALING AI IN THE EU FINANCIAL SECTOR



### VOJTECH BELLING

Executive Director, Financial Regulation and International Cooperation Department  
– Czech National Bank

### Scaling AI in Czech finance: from pilots to supervisory-grade solutions

Europe is entering the industrial phase of AI in finance. Pilots are no longer scarce, but credible scaling is. In practice, financial institutions that scale AI are those that can industrialise AI based products. They can show where data came from, why a model behaves as it does, who is accountable within organisation, and how outcomes are monitored over time.

From what I observe in the Czech market, four operational drivers make the difference.

First driver is data productisation. Banks, insurers and other institutions sit on deep customer and transaction histories, but too often it is hard to use because it is stuck in old systems, scattered across separate databases, and described in different ways in different parts of the business. Scaling AI starts

with making key datasets "fit for use" across the organisation: someone is clearly responsible for them, quality is measured, access is controlled, and it is always clear what the data may and may not be used for. This matters even more with generative AI, where a seemingly helpful answer can unintentionally blend confidential, personal, and public information.

Second driver is making AI run like a dependable business service, not a one-off experiment. The real challenge is not having one model but managing many of them across the organisation without risks and costs escalating. That requires a repeatable way to take pilots into production, with clear testing, clear documentation, ongoing oversight, and the ability to pause or switch off a solution quickly when issues appear. If AI is allowed to take actions, it also needs strict boundaries on what it may do and a clear record of what it did.

Third driver is computational adequacy and vendor capabilities. The Czech market is efficient but relatively small, so many financial institutions will rely on shared platforms, cloud services, and third-party foundation models. That makes supplier selection and oversight a strategic issue, not a technical detail. Procurement discipline, exit plans, and concentration risk management become essential, because dependence on a few providers can quickly turn into a resilience and continuity risk.

Fourth driver is an organisational readiness. AI and automation do not fit neatly into traditional operating models. Business owners need to be comfortable with systems that produce probabilities rather than certainties, risk and compliance teams need to work in shorter, iterative cycles, and front-line staff must be trained to challenge and verify outputs instead of accepting them blindly. The best results come when organisations redesign end-to-end processes around AI, with human oversight built in by design, rather than simply adding a model on top of unchanged workflows.

Risks are shifting as well. Traditional model risk such as bias and overfitting remains, but generative and agentic AI add new failure modes. These include hallucinations that look increasingly confident, prompt injections, data leakages, and risks related to actions where agents trigger inappropriate

payments, communications, or trading instructions. As deployment grows, systemic risks rise too.

Limitations to AI driven value creation are emerging in three places. The first case is diminishing returns. Once the low hanging fruit such as fraud triage, document extraction, and call centre support is captured, further progress depends on a stronger commitment to change: improving internal processes and rebuilding the data foundations. The second case is data rights and its trust aspects. Without clear legal bases, consent management, and retention discipline, many use cases stall. The third case is the trade-off between explainability and performance. For high-impact decisions—such as lending, pricing, or claims—demonstrating fairness and reliability, and ensuring people can challenge outcomes, may cost more than the added benefit of using a more complex model, unless these checks are automated and built into how solutions are delivered.

**In finance, scaling AI means scaling evidence, controls, and accountability.**

Do European rules provide the right conditions? In general, yes. The AI Act risk based logic, DORA operational resilience discipline, and GDPR data protection principles may push firms toward safer ways scaling while compliance may be more burdensome at the beginning. Overlapping reporting, fragmented interpretations, and uncertainty around documentation may create frictions, especially for small and mid-sized institutions. Digital and AI Omnibuses initiatives could help industry if they reduce duplication across AI, cyber, and data rules, and if they provide environment for clearer implementation guidance that supervisors may apply consistently. Especially in the areas where technical standards are being prepared this would be crucial.

The main EU policy priority in this sector should not be another layer of sector specific AI legislation for now, but rather effective implementation and thorough monitoring of current developments.



## SIMON WALLS

Executive Director of  
Markets – Financial  
Conduct Authority (FCA)

### How Artificial Intelligence is being used in UK financial services

The impact of AI on firms and regulators is set to grow. As firms expand experimenting and innovation to their core activities, from market monitoring and risk management to compliance and customer interactions, we can expect more consequential effects. We must make space for innovation and ensure that our regulatory landscape is ready for uncharted waters.

As AI becomes more deeply embedded, the conversation between regulators and industry focuses on accountability, transparency and oversight, but equally on how we can enable innovation. Many firms no longer think about AI as a marginal activity, but about how to integrate it into live, core processes where it will have significant effect. This raises new challenges, because with AI outcomes cannot always be fully explained in real time.

In practice, many of the toughest issues will only emerge once systems are exposed to real-world behaviour, and so demands agility.

There is no single approach to AI for every use case. An AI-enabled market surveillance system presents different risks and may require different controls

from AI used to improve back-office efficiency. A common theme has however emerged: firms that are using AI responsibly are taking a lifecycle approach. This means identifying risks upfront, applying controls that fit the use case, testing the system rigorously and monitoring outcomes once systems are live.

At the FCA, our focus is enabling firms to realise the benefits of innovation whilst enabling the safe and responsible use of AI. This includes use cases where AI can make activities simpler and cheaper, or support choice and problem solving. At the same time, we want firms to manage the risks that may come with it.

Accordingly, our approach along with other fast-moving technologies, remains outcomes based, proportionate and tech-neutral based on our existing rules. We won't reach for new rules or prescription on AI unless specific issues emerge. This is not a passive stance. It's a deliberate choice, that gives us and firms the necessary flexibility to adapt to technological change and market developments whilst making room for innovation. We believe this is the best way to support UK growth and protect consumers. It may remain an exacting standard as existing outcomes need to be met.

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Another major angle is how regulation should change to make the most of this new world. Should we change our approach to retail disclosures to account for a world where consumers may be armed with a massively enhanced ability to process information? What regulatory approach is needed to ensure that AI can be used to lower information asymmetries and further the public good rather than being walled off and monetised only by those with the data?

Engagement with industry is central to deepen our understanding of how AI is used in practice and to build our supervisory capability. This is complemented by practical initiatives to support firms as they move from pilots to deployment.

Our AI Lab is a regulatory innovation hub, designed to deepen the FCA's

understanding of AI and support safe experimentation. This includes the new Supercharged Sandbox, built with Nvidia, giving firms a safe, structured space to try out and refine early AI ideas before launch. It combines powerful computing tools with direct contact with regulators, helping teams move beyond theoretical experiments and test their assumptions, methods and risk controls in real-world conditions.

Alongside this, our AI Live Testing helps firms move safely beyond proof of concept and into real-world deployment. It provides a structured but flexible environment to test AI systems in live market conditions with regulatory and technical support, focusing on how systems operate in context. This helps firms avoid "perpetual pilots" and supports shared learning about how principles translate into safe and responsible outcomes for consumers and markets.

We are very pleased with the take-up from firms for these services. Together, they offer a practical model for how a regulator can enable innovation at scale without compromising standards or accountability.

AI is inherently cross-border in nature, making international discussion important as shared principles and coordinated work through international bodies help support consistency, market integrity and responsible innovation.

The FCA is deepening partnerships, including our initiative with the Monetary Authority of Singapore to support safe and scalable deployment of AI through joint testing and regulatory collaboration. This sits alongside wider work to support innovation while managing risks, from progress on the UK's cryptoasset regime to advances in fund tokenisation and the Digital Securities Sandbox.

No single firm, regulator or jurisdiction has all the answers yet. The priority for us all is to keep learning, with appropriate safeguards in place, so beneficial innovation can continue while maintaining market integrity, protecting consumers and supporting effective competition.



## TOM GOLDREICH

Head of Financial  
Technologies – Israel  
Securities Authority (ISA)

### Evolution or revolution? AI in Israel's financial sector

Artificial intelligence (AI) is becoming an increasingly significant feature of Israel's financial sector, though its adoption has so far been deliberate and risk-aware rather than disruptive. In December 2025, the inter-agency taskforce examining the use of AI in the Israeli financial sector published its final report, demonstrating that the dominant pattern is gradual integration into existing activities, with emphasis on efficiency, compliance, and decision support, rather than overall transformation of financial business models.

At present, AI creates the greatest value in areas characterized by large data volumes and analytically intensive, repetitive processes. Financial institutions in Israel are deploying AI-based tools to strengthen fraud detection, anti-money laundering and compliance functions, enhance credit risk assessment, and improve customer interfaces. In investment advice and portfolio management, algorithmic systems increasingly support suitability assessments, risk profiling, and ongoing monitoring, allowing licensed professionals to scale services while

remaining subject to established regulatory obligations. Similar dynamics are evident in banking credit processes and insurance underwriting, where AI represents a natural evolution of long-standing statistical and actuarial techniques rather than a fundamental break from them.

Despite heightened interest following the rapid development of large language models (LLMs) and generative AI (GAI), the report finds that adoption of advanced AI systems by financial institutions remains cautious. Concerns relating to explainability, governance (including data governance), accountability, and privacy continue to decelerate large-scale deployment. As a result, the impact of AI to date is best described as incremental: delivering efficiency gains, cost reductions, and improved risk management, while leaving core governance frameworks and human decision-making largely intact.

One of the most complex challenges addressed in the report concerns explainability, given the “black box” characteristics of advanced AI systems. The report distinguishes between general explainability, understanding a system's overall logic and limitations; and specific explainability the ability to explain a particular output or decision. This distinction is central in financial services, where explainability supports supervision and consumer protection. The report cautions against imposing a blanket requirement for full specific explainability, as this could prevent and discourage the use of advanced AI models. It therefore adopts a risk-based approach, focusing stricter requirements on high-risk systems and material adverse outcomes. Compensatory safeguards, such as enhanced monitoring, robust validation and controls, alternative service channels, and human intervention or appeal mechanisms, may reduce the need for strict specific explainability.

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#### Looking ahead, the report identifies the potential for a more transformative impact.

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Looking ahead, the report identifies the potential for a more transformative impact. Generative AI systems may significantly reshape customer engagement, research, and internal knowledge management, while agentic AI could enable end-to-end autonomous and automated selected financial processes. If adopted at scale, AI may affect market

structure, amplify systemic dynamics such as herding behavior, and increase dependence on a limited number of technology providers.

Israeli policymakers and financial regulators are acutely aware of these developments. The regulatory framework outlined in the report adopts a sector-specific, principles-based approach that seeks to balance innovation with effective risk management. Rather than imposing rigid, technology-specific rules, the report emphasizes risk-based supervision, technological neutrality, and reliance on existing financial regulation, complemented where necessary by guidance on governance, explainability, human oversight, data protection, and responsibility. Soft regulatory tools, such as supervisory guidance, innovation hubs, and regulatory sandboxes, are favored to preserve flexibility in a rapidly evolving environment.

This approach reflects a conscious effort to encourage innovation while safeguarding consumer protection, market integrity, competition, and financial stability. Responsibility for AI-driven outcomes remains firmly with regulated entities, including where systems are developed or supplied by third parties, thereby reinforcing the traditional and well-established principles of accountability in the financial sector.

Finally, the report underscores the importance of international coordination. AI technologies and financial markets are inherently cross-border, and divergent regulatory approaches risk fragmentation and regulatory arbitrage. There is clear scope for deeper international alignment, particularly around shared principles, supervisory practices, and emerging standards, to support both innovation and resilience as AI's role in finance continues to evolve.



## ASHLEY LESTER

Global Chief Research &  
Development Officer – MSCI

### AI: transforming data and information generation and consumption

AI is transforming the world of data and modelling at a previously inconceivable rate. In financial services, both internal processes and external products have already changed significantly, and they will change much more over the balance of 2026. Two to three years from now, the industry will in many key aspects be nearly unrecognisable.

Since, like information services, regulation is also a large scale, data- and knowledge-intensive process this suggests that regulators have a unique opportunity to transform their playbook for the better over the next few years. The challenge for businesses and regulators alike will be to move at a pace commensurate with that of the underlying technology.

Here are the three key changes that are immediately visible:

The quantity of data available will explode. The rise of computing in the 1970s reduced the price of numerical calculations by orders of magnitude. As a result, whole new industries arose and the amount of data in the world exploded. What 1970s computers did to numbers, generative AI is doing to words. Text can be almost instantly

and seamlessly converted to structured data, systematized and regenerated. For companies involved in data and modelling, not only does this mean we can capture qualitative data points more quickly, easily and consistently, but also that we can potentially capture many more such data points than ever before.

The speed at which data can be captured is transformed. With theoretically no need for humans to read documents in order to generate data and conclusions, relevant and actionable insights can be generated in nearly real time rather than with months of delay.

Data can be consumed far more quickly and easily. Qualitative analysis, even with online search engines, has been at best an art. Generative AI democratises high quality access to qualitative data, and enables rapid manipulation of quantitative data that would previously have required whole teams. Generative AI will particularly benefit senior professionals, who ironically for decades have had to rely on juniors with the time and skills to write database queries and generate analyses while their own skills atrophy in floods of meetings.

Of course, the more extraordinary a new technology, the greater the attendant risks. The risks of hallucination are real (but increasingly manageable), as are the risks of discrimination. But there are other, more subtle risks:

AI may be the easiest technology ever created. But ease of use encourages ad hoc use over auditable or consistent procedures. At MSCI, our clients demand a flexible environment where they can explore ideas and generate insights quickly, BUT also a controlled and auditable environment for recurring workflows.

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Sophisticated multi-agent solutions are soon going to be capable of taking over whole workflows previously performed by humans. As we create these agentic solutions, both we and our clients must be clear about where – and with which human – final accountability lies. The new solutions will be faster, clearer, typically more accurate and much more consistent than humans. But users must still take limitations seriously and have appropriate checks and safeguards in place – without destroying the

underlying economic rationale in the first place.

Our clients expect our models to be scientifically grounded – meaning at a minimum replicable – and properly validated. But generative AI is a stochastic technology, meaning it is not built to produce the same answer twice. Moreover, different LLMs can produce very different answers to the same question – a situation fundamentally unlike traditional computing, in which any program will always give the same answer to the same problem, such as the matrix multiplications needed to produce risk statistics.

Finally, it is important to say a few words about what won't change. Certain products, by their nature, need to be correct 100 per cent of the time. Indexes for benchmarking investment strategies are an important example. AI could help clients create custom indexes to their exact specification faster and more reliably, and it will help clients better understand features of their methodology and performance. But the core features of an index: what it is and why it must be reliable, will not change at all.

AI is by far the most exciting technology of our lifetimes. At MSCI, it is transforming our business and enabling us to bring far greater economic value to our clients than ever before. We carefully consider and proactively handle the risks of AI because we believe a thoughtful approach to these will be a key distinguishing feature across businesses in the coming years. Handled similarly, AI could enhance regulatory effectiveness while reducing its cost, providing key benefits to the European finance sector and economy more broadly in the near future.



## DAVID HENRY DOYLE

Global Head of Policy & Strategy, Government Affairs & Public Policy – S&P Global

### AI and the financial system: integration, infrastructure, and oversight

Artificial intelligence is reshaping finance in ways that go beyond individual products or business models. As the financial system grapples with the consequences of this profound transformation, two trends stand out.

First, AI is becoming progressively embedded as a core technology in the processes and functions of financial markets. This integration will inevitably influence how risks are assessed, prices are formed, and capital is allocated.

Second, the physical technology and infrastructure that make advanced AI possible are highly capital-intensive. As a result, these assets are increasingly being financed, owned, and valued through financial markets on a rapidly expanding scale.

Taken together, these developments suggest that AI will operate not only as a tool at the firm level, but also as infrastructure supporting the functioning of the financial system, and as a new source of financial exposure in markets.

The convergence of these trends elevates the importance of a third AI

workstream: ensuring that governance, supervision, and market oversight practices adapt effectively to enable innovation, safeguard financial stability, and promote market integrity.

#### Integration

As IOSCO pointed out in its 2025 report, use of AI in capital markets is not a recent phenomenon. Over the past decade, financial market participants have steadily integrated machine learning into back-office functions and middle-office operations. According to S&P Global's data, 54% of financial services companies surveyed had deployed AI initiatives as of January 2025, up from 40% a year earlier.

Use cases across a wide range of institutions already support decision making in and automation of processes like coding, information extraction, investment research, AML/CTF, fraud detection, market surveillance, risk management, algorithmic trading, and portfolio optimization.

While adoption remains uneven, AI is beginning to resemble a new layer of information management infrastructure within the financial system. As autonomous agentic AI systems emerge, use cases are likely to become more sophisticated and widely deployed. For now, it remains uncertain how far this trajectory will progress from responding to market dynamics toward actively shaping price formation and risk transmission across markets.

#### Infrastructure

At the same time, the rapid expansion of AI has brought renewed attention to the capital-intensive infrastructure needed to operate the technology at scale. This includes specialised chip production facilities, hyperscale data centres, high-performance computing clusters as well as associated energy and connectivity infrastructure.

These assets are attracting remarkable levels of investment interest. According to S&P Global's research, \$450 billion of data-centre transactions have occurred over the last five years, financed with more than \$300 billion of debt. Two-thirds of this amount was spent in just the last two years.

The growth of these capital flows to fund AI infrastructure creates new exposures to the performance of these assets in the financial system. Their valuation requires careful assessments of financial structures, productivity, profitability, offtake demand, and supply-chain commitments.

#### Oversight

These developments present several challenges for financial supervision. Firm-specific oversight will remain essential to ensuring that governance frameworks continue to evolve and manage emerging risks. However, many of the risks associated with AI may only emerge at the system level.

Shared dependencies on third-party providers, common model usage across firms, and collective behavioural effects have the potential to lead to herding actions across institutions. This, in turn, could create correlated vulnerabilities that only become visible in aggregate and under specific conditions.

In recent years, through initiatives like the EU's Digital Operational Resilience Act (DORA), financial market regulation and supervision have placed greater emphasis on operational resilience and third-party dependencies. This is a welcome step that provides a solid foundation for extending supervisory attention to other system-wide interactions, including those involving AI.

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**AI is no longer confined to the periphery of financial innovation.**

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#### Future Policy Implications

To conclude, the financial system is experiencing a multifaceted transformation in this space. AI is no longer confined to the periphery of financial innovation. It functions increasingly as an information intermediary in how markets operate. Meanwhile, the assets and investments underpinning AI technology are also becoming funded and intermediated through financial markets themselves.

In a future where AI operates across multiple layers of the financial system and is itself financialised, effective governance and supervision will be essential preconditions for both stability and innovation. The collective task for market participants, policymakers, and supervisors is to ensure that governance frameworks evolve in step with this change.