

## HOW WILL AI TRANSFORM FINANCIAL SERVICES?



### MAYTE LEDO

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### How AI is reshaping finance: A central bank view

Artificial Intelligence (AI) has rapidly emerged as one of the most transformative technologies of our time. Its ability to reshape the services sector—particularly the financial industry, which has historically been an early adopter of technological innovation—sets it apart.

In the coming years, AI is expected to play a pivotal role in transforming the operations of central banks, influencing everything from monetary policy to financial stability. Furthermore, AI will enable us to address an increasing number of complex and novel tasks, such as system-wide risk monitoring and economic analysis in an environment marked by heightened uncertainty. In meeting these challenges, central banks must integrate AI in a way that maximizes its benefits while proactively mitigating its risks.

On the opportunity side, AI stands to markedly improve analytical capabilities through enhanced processing of granular and real-time information, contributing to a better grasp of

monetary policy transmission channels. Given that economic dynamics often exhibit complex, nonlinear patterns that challenge traditional forecasting models, AI offers the ability to extract more accurate signals from key macroeconomic variables such as inflation, employment, and overall economic momentum. It may also support a deeper understanding of the multi-dimensional and long-term drivers of potential growth, from productivity trends to geopolitical developments.

AI's potential goes beyond the design of monetary policy to its operational implementation. It will extend to payment systems and financial market operations—core functions of central banking—which are themselves at the forefront of technological innovation.

At the same time, central banks have a fundamental responsibility to safeguard financial stability. In this regard, they must remain vigilant in monitoring and managing the risks associated with the adoption of AI across the financial system. Certain characteristics of these technologies, such as algorithmic homogenization or misuse, could amplify the transmission of financial shocks. A key concern is the growing interdependence of financial institutions and the concentration of AI infrastructure among a small number of providers.

The use of AI in financial services—particularly in areas such as credit scoring and loan approval—also raises important ethical considerations, especially concerning the protection of individual rights, as outlined in the European AI Act. In Spain, the central bank will serve as the market surveillance authority for these high-risk AI systems, fulfilling this role through its conduct supervision mandate. Ensuring transparency will be essential to prevent adverse outcomes such as discrimination in credit allocation or unfair decision-making processes.

To scale up AI adoption, a dual strategy based on collaboration and centralized resources is essential. For this reason, a new department focused on experimentation and the application of emerging technologies will play a central role in advancing AI integration across the Banco de España. It will prioritize practical use cases, focus on solution delivery, and emphasize the

development of generative AI models and AI agents.

Fostering responsible, AI-driven innovation requires robust computational infrastructure, effective data-sharing frameworks, and a skilled workforce, supported by continuous upskilling and reskilling. Collaboration remains essential across all these domains.

Data and information have become new factors of production. Building more open data ecosystems—while ensuring confidentiality and anonymity—is essential for developing richer and more accurate models, unlocking the full potential of AI, and fostering across-the-board innovation. Central banks hold extensive datasets and are increasingly making them available, based on the belief that fair access to information serves the public interest.

In addition, the scarcity of talent presents a major challenge for both the financial sector and central banks in realizing their AI ambitions. Attracting and retaining key profiles—such as data scientists and AI engineers—requires offering meaningful, forward-looking projects with a long-term vision. In this context, our partnership with the Barcelona Supercomputing Center is especially significant. It provides access to high-performance computing resources, joint research programs, and collaboration with one of the seven AI factories being developed across Europe.

### Capturing AI's transformational impact needs reinforced capacity and close collaboration.

As AI continues to evolve, central banks must work closely with the financial sector to ensure its responsible and ethical use. At the Banco de España, we will soon launch an innovation hub to support the integration of AI into the financial system in line with the transparency requirements established in the AI Act.

The AI journey has only just begun, yet the opportunities it offers are profound, and realizing them fully will require broad-based collaboration.



## NATHANAËL BENJAMIN

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### The safe adoption of Artificial Intelligence (AI) in finance

AI's transformative potential spans the economy, beyond finance. Goldman Sachs estimate AI will lift global GDP by \$7 trillion (7%) over 10 years by boosting productivity growth – a key priority across advanced economies. In the financial sector, another study estimates generative AI could deliver up to 30% productivity gains over 15 years.

It is vital that the financial sector and broader economy fully harness and realise these benefits. This requires imagination, expertise, and asking the right questions – shortages in AI and data skills could hinder progress.

The financial sector is already embracing AI. Our 2024 *AI in Financial Services* survey shows 75% of firms use AI, up from 53% in 2022, with 10% more planning to adopt over three years. In an inherently numbers-driven industry, AI's ability to process large datasets and generate insights is reshaping the landscape. AI is often used to improve existing processes like customer interactions. But increasingly it enhances decision-making, helps to develop better and more tailored products, and supports risk management, including fighting

financial crime. This is likely only the beginning.

However, AI introduces potential risks to individual firms and the broader financial system. Some are not new, but it's crucial to discern real issues from the noise, and sharpen our focus. The UK's Financial Policy Committee is focused on the four following channels of risk to financial stability:

The greater use of AI in banks' and insurers' core financial decision-making. Some risks are microprudential in nature: AI systems rely heavily on data, raising issues of quality and integrity – rubbish in, rubbish out! Their complexity and dynamism also pose challenges of predictability, explainability, and transparency. If banks and insurers increasingly use AI-driven decisions without appropriate controls, some risk-taking may be misunderstood. Personal accountability has to be clear for all decisions – including those driven by AI.

Sound risk management in each firm is necessary but not sufficient for system-wide resilience. Well-managed and regulated risks by firms can still pose stability risks if firms act collectively without the right information or incentives to consider system-level outcomes. Common weaknesses in model and data risk management across firms could introduce significant unknown errors or bias, especially when using the same model components or data. This could lead to widespread misestimation of risks, mispricing, and credit misallocation, resulting in losses, tightening credit supply, or broader financial contagion through a loss of confidence.

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#### The safe adoption of AI is vital to promote productive growth and financial stability.

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The use of AI in systemic financial markets. First, AI-based risk allocation or trading strategies could lead to firms taking increasingly correlated positions, some herding, potentially amplifying shocks. Second, autonomous AI agents might interact in ways that cannot be known by firms when launching them individually, and their collective impact on the market might lead to an unknown equilibrium. Third, AI agents could exploit weaknesses in other firms' strategies and arbitrage opportunities, which might make sense in isolation but could trigger or amplify price movements in ways that are unanticipated.

While AI can strengthen cyber-defences, it can also increase the sophistication of cyber-attacks, which can then spread across the financial system through operational contagion or erosion of confidence. Longer-term, the potential for malicious actors to combine AI with quantum computing to cause disruption or break encryption coding warrants particular attention.

Widespread reliance on a small number of common providers in the AI ecosystem could lead to systemic impacts in the event of operational disruptions at those providers.

There will be other risks. And AI will evolve in unforeseen ways. But these four channels are our priority focus. So we are enhancing our monitoring – tracking developments in use cases and adoption, using quantitative and qualitative information, including regular AI financial services surveys, our AI consortium, and targeted intelligence gathering. Our approach will remain flexible and forward-looking, adapting to evolving risks and new information.

We also engage in international initiatives to monitor and mitigate AI risks, such as those led by the Financial Stability Board. Successful AI integration requires collaboration between regulators, financial institutions, and technology providers.

AI must boost the financial system's ability to support the economy, but that can't happen if overall resilience gets compromised. So adoption must be sustainable, and with appropriate safeguards. Enhanced monitoring is essential to understand how risks can play out, and that needs to happen before concluding on whether additional actions are required to support safe adoption.



## JULIE GERDEMAN

Global Head of Data  
& Analytics – BNY

### AI for everyone – continuing the digitization of our business

At BNY, we see AI as a key enabler to deliver more value to clients, drive innovation, and improve operational resilience. This includes leveraging AI in new product offerings, but also for internal decision making and operational processing, amongst others.

BNY is not alone in seeing this massive potential for AI to transform financial services – AI investments are expected to reach nearly \$100 billion by 2027<sup>1</sup> – but we've been at the forefront in putting this transformative technology into the hands of every BNY employee; hence why the phrase "AI for everyone" has become pervasive across the firm. For more than five years, we have been creating AI-enabled solutions for financial services – in fact, we were the first major bank to deploy an AI Supercomputer, powered by Nvidia, to accelerate processing capacity and launch AI-enabled capabilities.

In 2023, BNY launched its AI Hub, a centralized platform that leverages artificial intelligence to enhance business processes and operations to drive efficiency, decision-making, and innovation, and has been building out and refining Eliza, BNY's enterprise AI platform. Eliza is designed to be general-

intelligence and model agnostic, support multi-agentic functionality and serve as a foundation for our digital employees of the future. Our AI Hub includes hundreds of data scientists, engineers, architects, and risk and control experts with an operating model designed to incubate, build and deploy solutions at scale. Our employees have generated hundreds of use cases and as of today we have over 50 AI solutions in production, touching nearly every part of our business.

BNY's Data & Analytics offers a data platform that is leveraged by buy-side firms across the globe –including asset servicing providers – most notably our own BNY Asset Servicing. We have more than \$51 trillion in assets on our data platform, demonstrating another trend in financial services – the recognition of data as a driver for growth.

Leveraging AI, we've created data sets of metadata to simplify onboarding, data governance, and migration activities. Our platform provides chatbots that assist with the creation of data models and data quality rules. To respond to the exponential growth expected in private market AUM, we've introduced Intelligent Document Processing, which connects, organizes, and interrogates massive amounts of disconnected structured and unstructured data to uncover "the gold" inherent in these disparate data sources, ultimately getting the right insights to the business to guide better (and faster) decision making.

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**The next phase could  
bring more fundamental  
shifts that allow us  
to reimagine entire  
business models.**

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Today, BNY's AI-enabled solutions support predictive analytics, automation and anomaly detection, among other capabilities. AI is augmenting our staff, enabling them to focus on higher-value tasks by reducing manual workloads and error rates. We design our solutions to help clients transform their businesses while enhancing our own infrastructure. We are exploring ways to harness the power of AI in our new product offerings to enable faster decision-making and increased efficiency.

As AI technologies mature, you can expect to see shifts from discrete automation projects to more comprehensive, AI-enabled platforms. Generative AI,

with its ability to synthesize, interpret, and generate complex data, is likely to unlock new efficiencies in client reporting, regulatory compliance, and product innovation. In time, agentic AI could manage entire processes like trade settlement or collateral optimization.

If the first waves of AI adoption are focused on efficiency, accuracy, and scalability, the next phase could bring about more fundamental shifts to position AI as a decision-making partner that allows us to reimagine entire business models, facilitate the creation of new products and services, challenge legacy workflows, and inspire innovative client experiences that were previously unimaginable.

AI for Everyone is far more than a catch phrase at BNY – a financial services leader that has been in the business for more than 240 years while also being named by *Fortune* as one of America's "Most Innovative Companies," for the third time in as many years. BNY is fully committed to the continued digitization of our business, leveraging AI as a key component, investing nearly \$4 billion in technology and research and development annually to provide our clients with access to new capabilities while enhancing our operations for efficiency, scalability and resiliency.

1. *World Economic Forum, Artificial Intelligence in Financial Services white paper (January 2025)*





## CHRISTIAN EDELMANN

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Oliver Wyman (UK)

### Moving from pilot to profit: AI's next chapter for European finance

Europe's financial sector is experiencing an "internet 1996" moment with artificial intelligence: Everyone can see the direction of travel, yet the gap between pioneers and followers is already visible.

If the followers don't step up their efforts soon, they could be left behind permanently.

The latest Oliver Wyman Forum survey shows that 17% of NYSE-listed companies—and 16% of European respondents—have already achieved revenue or cost improvements of more than 10% from AI initiatives, and these leaders are five times likelier than peers to say projects exceeded return on investment expectations (25% versus 5%).

The opportunity is vast because the areas incumbents dominate—trust, balance sheets and data—are exactly what AI can amplify. Customers still entrust their salaries and savings to established firms, reducing the firms' funding costs, because of their robust regulatory oversight and risk management. That trust yields a torrent of data which, if activated, could fuel hyper-personalised offers before open-banking interfaces fully level the playing field.

In practice, however, many banks, insurers and asset managers treat AI as a series of proofs-of-concept rather than a strategic operating system as they await perfect regulation, flawless AI models or both. The risk is that market share and cost advantage will drift to faster competitors. Fintech and big tech have already captured material share, especially in payments and retail brokerage.

For established firms, cultural change sits at the heart of any credible AI roadmap. They face the organisational hurdle of orienting around product silos while AI rewards customer-centric design and data usage across the organization. That obstacle must be cleared.

Equally important is adopting a marginal-cost-to-zero mindset. That will turn efficiency into growth and, ultimately, benefit the broader European growth agenda.

Lending provides a vivid illustration. When marginal cost approaches zero, lenders can viably serve thinner-margin segments such as startups, gig-economy workers and micro-SMEs, which legacy processes have priced out. At one European bank we have worked with, an AI engine that pre-underwrites small business loans by combining transactional flows, point-of-sale receipts and sector benchmarks has cut unit underwriting costs by about 70%, shrunk decision times from days to minutes and expanded the addressable market enough to lift SME lending revenue by about 50%.

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**Generative AI won't make banks obsolete; it will make some banks extraordinary.**

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Several traits separate AI leaders from laggards. First, leaders treat data as a product with clear ownership, service-level agreements and roadmaps; without that discipline, even state-of-the-art models disappoint. Second, their vendor strategy balances speed against dependence: black-box demonstrations, "100% accuracy" claims or unclear model lineage are red flags. Third, reliability economics matter, because every additional "nine" of availability—from 90% to 99,999%—requires exponentially greater investment, and boards must decide where full autonomy is genuinely worth the spend.

Finally, AI leaders' workforces evolve. CEOs overwhelmingly expect AI to raise

productivity rather than cut headcount, yet staff reskilling is still behind the curve. Employees at AI-leading firms are 3.5 times likelier to use AI daily and twice as likely to say it has changed collaboration, creating a cultural flywheel that accelerates adoption.

Leaders are already wiring these elements into execution. In all, 71% of AI-leader CEOs cite technology as the prime driver of long-term competitiveness, compared with 45% of non-leaders, and almost a third of leaders already generate more than 20% of revenue from AI-enabled products. They involve their boards more actively, especially in engaging regulators and investors, and favor organic capability building over acquisitions as the path to shareholder value. They also tie success to metrics that cut through hype: AI revenue share, marginal cost per transaction and employee engagement.

For institutions still in pilot mode, the 2025 agenda is clear: They need to articulate a North Star ambition anchored in the business model of the future, not a bunch of AI widgets bolted onto legacy architecture. They should engage supervisors early so governance becomes a competitive advantage rather than a retrofit tax. They must track the metrics that leaders already watch, and they must mobilise boards to own the external narrative.

Generative AI won't make banks obsolete; it will make some banks extraordinary. Those that fuse hard-earned trust, proprietary data and disciplined execution into AI-native operating models will extend their advantage rapidly, while those that hesitate will lose ground by the quarter. For Europe's financial champions, the moment to choose between pilot and profit is now.



## ALEX IVANČO

Financial Counsellor, Head of Financial and Cohesion Policy Unit – Permanent Representation of the Czech Republic to the EU

### AI in Czech financial services – Czech fintech leverage AI for global expansion

While the Czech financial sector is moving from early artificial intelligence (AI) pilots toward autonomous, adaptive and highly personalized financial services, Czech fintech companies have rapidly become leading exporters of innovation by integrating AI into their core services delivering instant risk scoring, fraud detection, and payment data enrichment at scale—capabilities that differentiate them in international markets and fuel successful global expansion.

Digital development of the economy remains in the forefront of the Czech Republic's progress. Advances in financial services reflect a systematic approach to innovation, combining strong regulatory foundations, pioneering companies, and early adoption of digital technologies. For some, the Czech Republic is an incubator of innovative fintech companies thanks to its broad base of startups and the openness of Czech consumers to use digitalized services. According to the latest reports, in June 2025, instant payments, with 99% market coverage accounted for 40 % of all payments in Czechia, extending their importance beyond account-to-account transfers.

In AI adoption, the Czech financial sector has crossed the proof-of-concept threshold, delivering measurable improvements in efficiency, personalization, and security. Major Czech banks have integrated AI into a wide range of processes, thereby increasing productivity and reducing operating costs. AI-powered fraud detection, real-time risk assessment, automated lending, and customer onboarding have become a new standard.

In particular, chatbots, voicebots and personalization engines are reducing customer wait times, offering 24/7 services and enabling personalized products offers. Automation of back-office processes, document handling, and credit-risk assessment then brings direct savings and allows human resources to be shifted to higher-value tasks. As for risk and compliance, transaction anomaly engines and behavioral biometrics are enabling real-time fraud detection and enhanced security for those who invest in their deployment.

With the development of agentic AI, Czech banks are also exploring autonomous underwriting, dynamic product bundling, and smart contract execution, aiming for “always-on” financial platforms adaptable to real-world data and customer needs without continuous human intervention. Although this might still sound like the future, the financial sector is currently undergoing rapid optimization: combined force of generative and agentic AI is paving the way for an era in which autonomous, adaptive financial services will become the norm. The transformation is not just about improving services, but also about fundamentally redefining the meaning of financial intermediation in the digital age.

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**Our aspiration for the future: to lead in solutions.**

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Czech fintech companies are leveraging AI also as a core engine for their international growth. By exporting advanced AI solutions for lending, security, open banking, and data analytics, they partner with global financial institutions, adapt to new regulatory settings, and meet the evolving needs of banks and consumers worldwide. Fintech firms like Resistant AI (fraud detection), Wultra (post-quantum authentication), Flowpay and Lemonero (AI-driven SME and e-commerce lending), Dateio (transaction data), Trask (hyper-personalization) and ThreatMark

(behavioral biometrics) belong to the key innovators and have established themselves as international reference points. Their expertise in scalable, API-driven AI deployments places Czechia at the forefront of fintech export and cross-border innovation.

While it might be difficult to experience a momentous transformation of the way financial services are delivered and consumed, EU homegrown dynamic and globally active fintech companies already show the way how to develop modern, digital economy; by upholding our values and leading in solutions, whether it's cyber resilience, data protection or post-quantum authentication. If we add to this the recognition that regulation is only a tool and the European leadership should be rather in values then this could indeed be the essence of our aspiration for the future: to lead in solutions.