



Speech

Intelligence artificielle

The challenges posed by AI from the perspective of the central bank

Published on 9th of April 2026

Speech by Denis Beau, First Deputy Governor
Brest, 2 April 2026

Ladies and gentlemen, dear students,

I would first like to thank the organisers from the *Institut d'Administration des Entreprises* in Brest for inviting me to open this event dedicated to artificial intelligence and its challenges. I would like to present the challenges from the perspective of a central bank such as the Banque de France, an independent public institution with nearly 9,000 employees, a member of the Eurosystem and the Single Supervisory Mechanism for European banks, whose objectives are to ensure monetary stability, financial stability and to provide services to the economy and society

For the Banque de France, AI affects both its objectives and the management of the resources it deploys to achieve them; I would therefore like to outline, in turn, the challenges the Bank faces due to these two types of impact.

1 - In order to ensure price stability, the Banque de France, together with the other central banks of the Eurosystem, needs to understand and assess the spread of AI throughout the economy and its impact. Indeed, we closely monitor all developments that could influence the economic outlook for the coming years, as well as prices. As regards the impact of AI on GDP – although it is difficult to assess as it operates through a number of different channels on both the demand and supply sides, and is hard to quantify – I draw the following three conclusions from recent data and research:

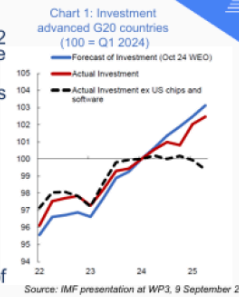
- **Its immediate impact on investment is substantial**, particularly in the United States, which is at the forefront of AI development. The IMF notes that, since early 2024, the strength of investment in the advanced G20 economies has been driven primarily by the US semiconductor and software sectors. In France, investment in software and databases has doubled over the last decade (a 2.5-fold increase in the United States), whilst investment in the construction of data centres has increased by a factor of 2.5.
- **In the long-term, AI is expected to have a significant impact on productivity.** According to Cerutti et al (2025),¹ global growth is expected to increase by 0.1 to 0.4 percentage point (pp) per year, due to a rise in productivity of 0.1 to 0.2 pp/year (amplified by its effects on capital accumulation and demand), with significant variations across countries. According to Aghion and Bunel (2024),² the adoption of AI over the next decade could boost annual productivity growth in developed countries by between 0.1 and 1.2 pp/year, depending on the pace and scale of adoption, with a median estimate of around 0.7 pp. This range is broadly consistent with the OECD's estimates for France, which range from 0.3 to 1.0 pp/year.

EXPECTED BUT UNCERTAIN IMPACT ON GROWTH AND EMPLOYMENT

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Impact on short-term growth:

- Goldman Sachs (October 2025): AI has boosted US GDP by USD 160 billion since 2022 (equivalent to 0.7% of GDP), but only USD 45 billion (0.2% of GDP) has been recorded in the national accounts.
- IMF: excluding semiconductors and software, investment is stagnating in advanced economies (see Chart 1).



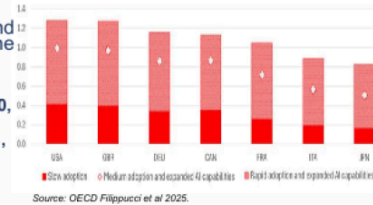
Positive impact on productivity in the medium term:

- Various estimates of the median impact of AI adoption:
 - Cerutti et al (2025): +0.1 to +0.2 p.p./year of annual productivity growth over ten years (global)
 - Aghion and Bunel (2024): +0.7 percentage point (for developed countries)
 - ECB: +0.3 percentage point/year (Europe),
 - Acemoglu: +0.5 percentage point/year (for the United States), ...
- However, the impact varies depending on the level of adoption and the expected performance of the AI.
- The OECD estimates an increase of between 0.4 and 1.3 percentage point in countries highly exposed to AI (the US and the UK) – due to a marked specialisation in AI-intensive services (see Figure 2).

Chart 2: Annual growth in labour productivity over the next 10 years (in percentage points)

Impact on employment: high degree of uncertainty

- The impact will depend on (i) the extent to which AI complements labour and capital, (ii) the type of workers replaced by AI (skilled or unskilled), and (iii) the number of new jobs created.
- Empirical findings that are currently mixed
 - According to Aghion et al. (2025, AEA P&P), based on French data from 2017–20, the impact on employment is expected to be positive over a four-year period
 - According to a survey (Yotzov et al., 2026) of business leaders in four countries, the expected impact is highly negative over the next three years



Expected but uncertain impact on growth and employment

- So far, the adoption of AI has had a limited impact on overall employment, and its implications for inequality remain unclear.**

According to Aghion et al. (2025),³ an analysis of French data covering the period 2017–20 suggests that the impact of adopting AI is likely to be positive at the 4-year horizon. According to a recent study (Yotzov et al., 2026), labour moves are expected to increase in the coming years, including in service sectors employing low-skilled workers, such as retail and hospitality.

As it affects the economy through a number of supply and demand channels, AI makes its overall impact on inflation and on r^* —the nominal interest rate required to maintain stable inflation whilst ensuring a level of demand consistent with full employment—highly uncertain. Furthermore, AI can have an impact not only on the level of inflation but also on its volatility.⁴

What implications do these observations have for the conduct of monetary policy? At this stage, no clear conclusions can be drawn regarding monetary policy for the euro area. The impact of AI is one of several ongoing structural changes (such as climate change or an ageing population) that affect the economy's long-term supply and potential growth. It is an important component in assessing the supply side, but does not exhibit any specific characteristics that would justify changing the reaction function of monetary policy.

AI AND MONETARY POLICY

The ambiguous effects of AI on the natural interest rate r^*

- This interest rate is that which keeps inflation stable in an economy operating at full capacity (low unemployment)
- The adoption of AI could boost aggregate demand and inflation, leading to a rise in the natural interest rate r^* in the short term.
- In the long term, the effect on r^* will depend on the relative shifts in supply and demand (which is linked to how AI affects employment).
- As the short-term effects on growth are already becoming apparent and are increasingly certain, greater weight must be given to them in monetary policy.

A specific monetary policy response is not necessary

- AI is one of several structural changes affecting long-term growth and long-term aggregate supply, such as climate change and an ageing population.
- These changes need to be analysed in order to understand their effects and thereby reduce the uncertainty surrounding the economic situation, so that the right monetary policy decisions can be taken.

AI and monetary policy

AI, however, is already having an impact on our financial stability mandate, due to its widespread adoption and the ways in which it is used by financial intermediaries. This is particularly the case for those which the *Autorité de contrôle prudentiel et de résolution* (ACPR) – the "watchdog" for banks and insurance companies in France, that is backed by the Banque de France – is tasked with supervising in order to limit their probability of default. Indeed, as a recent survey by the ACPR has shown, virtually all banks and insurance companies in France now use AI, whether it be to improve and personalise customer services, to optimise internal processes, or to manage risks more effectively.

However, the growing adoption of AI in the financial sector presents a number of risks, **particularly for financial stability** – for example, the reliance of financial institutions on major providers of AI models, who are also the leading providers of cloud services – and, obviously, for **consumers**.

These risks warrant regulatory oversight of the use of AI, which must ensure that it is developed in a controlled manner. This framework is, of course, the **European AI Act**, but it also includes sector-specific regulations, which apply to AI in the same way as they do to any other technology used by financial institutions.

ACPR supervisors are therefore now faced with the challenge of establishing **effective and efficient supervision of AI systems**. This must be both selective – what we call the “risk-based” approach – and thorough; in other words, we must be able to “look under the bonnet” of the algorithms in order to examine their technical characteristics. To achieve this, we will need to **build our capabilities** – including by recruiting new talent – and set about developing a **methodology for assessing AI** in the financial sector, addressing in particular new challenges such as the **explainability and fairness** of algorithms. Supervisors must, lastly, assist financial institutions in developing the “right” risk management tools.

AI IN OUR SUPERVISORY ACTIVITIES

The Banque de France (in the broad sense) is also responsible for financial supervision

- The *Autorité de contrôle prudentiel et de résolution* (ACPR) is the supervisory authority for banks and insurance companies in France, and operates under the aegis of the Banque de France

The use of AI in the financial sector comes with risks

- ACPR survey: almost all institutions (both banks and insurance companies) use AI
- Risks to financial stability (macro and micro) and to consumers
- These risks justify the regulatory framework for AI: European AI Act and existing financial regulations (technology-neutral):

Supervisors must therefore establish effective and efficient oversight of AI systems

- **Selective** (risk-based approach) and **thorough**
- To achieve this, we need to **develop our skills**
- ... but also develop a methodology for auditing AI in the financial sector...
- ...and **assist** the financial sector in developing the “right” risk management tools.

2 - In addition to its objectives, AI also affects the way the Banque de France manages the resources it deploys to achieve them, and consequently raises a number of challenges in terms of internal management, which I shall now outline for you.



AI AS A DRIVER OF INTERNAL TRANSFORMATION

AI is becoming an everyday tool for a central bank

- Roll-out of practical use cases across several business lines (supervision, HR, information security, processing overindebtedness applications)
- A solid technological foundation, combining an already operational data platform with advanced in-house expertise in data science, statistics and AI engineering.

Innovative Banking Initiative

- An acceleration in response to strong momentum: business needs + internal appetite
- Based on three pillars: clear AI governance, simplification and automation, and AI accessible to all

A two-part roadmap:

- **Making AI accessible to everyone:** employees who are proficient in the office software of the future, who can identify opportunities for process automation, and who will eventually be able to create simple bots themselves
- **Key priorities for the different business lines** aimed at improving working conditions, enhancing the quality of existing services, and even taking on new responsibilities, as well as controlling and reducing costs.

Towards a controlled industrialisation of AI applications

- AI: a strategic tool for strengthening our operations within a secure and sovereign framework

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AI as a driver of internal transformation

Indeed, AI is no longer a distant prospect for the Banque de France: **it is an operational tool that is already an integral part of our daily work.** To this end, we have built a robust technological foundation: a fully operational data platform and strong in-house expertise, ranging from data science to AI engineering. This foundation has enabled us to implement real-world use cases that support our missions. In 2025, we also rolled out Copilot Chat across all workstations: a conversational assistant that gave all our staff a first glimpse of the potential of AI in their day-to-day tasks, within a strict security framework limited to non-sensitive data.

We are now entering a very positive phase of acceleration. Business lines are expressing a growing interest in these technologies: expectations are high, and ideas are pouring in from all sides to transform working practices. With the expertise we already have in-house – which we intend to further strengthen – we have the ideal environment to expand the use of AI and make it a key driver of modernisation. To build on this momentum, we launched the **“Innovative Bank”** initiative in February 2026. It has three simple objectives: ensure **clear governance of AI**, simplify **and automate** our business processes, and, above all, **make AI accessible to everyone**, not just a handful of experts.

This initiative draws on a two-part roadmap. The first part aims to develop AI for all, by assisting each employee in making educated use of these tools on a daily basis. **Ensuring that all staff embrace** AI is a key challenge in terms of **employability**.

- A comprehensive training scheme is already in place, helping to ensure that our staff develop their skills and remain employable over the long-term. This will soon be supplemented by targeted support measures tailored to specific activities and business areas.
- **productivity**, with the aim of boosting productivity across the organisation by automating repetitive and time-consuming tasks, enabling teams to focus more on high-value-added tasks, and facilitating the sharing and reuse of AI assets deployed by staff.
- and **culture** with a view to empowering teams to transform themselves.

The second part aims to identify and implement transformation initiatives across our **key strategic priorities: operational efficiency** (staff time saved, FTE savings, improved productivity), **technical feasibility and data quality** (timeliness, availability, potential for large-scale deployment, integration into the IS) as well as **value added for the business lines** (improved quality, resolution of irritants, simplification of users' day-to-day tasks).

As you can see, AI is now a **strategic tool** for us to strengthen our ability to carry out our core missions and modernise our operations. In this way, we are, quite literally, building the **central bank of tomorrow**.

Let me give you a **very concrete example** of this approach. As part of our **supervisory** work at the ACPR, we examine the data reported by institutions in order to identify both major trends and early warning signs. This therefore provides the **ideal environment for deploying** tools – which we refer to as “SupTech” in our jargon – that enable supervision teams to work more efficiently.

Beyond improving productivity, the ACPR's aim is to equip its staff with new capabilities: not to replace humans by machines, but to create teams of **enhanced supervisors capable of doing both more and better**. For example, we have developed a tool called '**Véridic**', a large language model (**LLM**) capable of extracting the features of life insurance products from their "key information documents" in order to classify them according to their level of complexity, and thus the risk they pose to policyholders.

In addition to the tools developed, the ACPR's experiments have yielded a number of **insights** for the deployment of AI. For instance, they show that, before deploying automation tools, it is often necessary to **simplify at an early stage** both concepts and processes, as technology is not designed to handle the ambiguity that complexity inevitably generates. Another lesson is that it is important not only to **train** staff in the use of new tools – for example, by teaching them how to draft effective prompts – but also, at the same time, to **make them aware of the risks** these tools entail.

AI & FINANCIAL SUPERVISION: A CONCRETE CASE

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The SupTech (supervisory technologies) approach at the ACPR

- Large volumes of data reported by institutions
- Numerous analyses to be carried out, covering both major trends and weak signals

Our aim is not to replace humans with machines, but to create teams of "enhanced" supervisors capable of doing both more and better

- Machine translation of technical documents
- Transcript of audio recordings
- Automatic analysis of financial advertising
- Pre-analysis of regulatory reports
- Example of *Véridic*, an LLM designed to analyse "key information documents" (KIDs) for financial products

Lessons for the internal deployment of AI

- Need to simplify concepts (reporting, etc.) and supervision processes at an early stage, as technology cannot do everything
- Need to train staff not only in how to use the tools, but also alert them to their potential risks

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AI financial supervision: a concrete case

I will conclude by highlighting the **sovereignty issues at stake in our decisions regarding AI.**

We are currently in the process of selecting a solution to provide our staff with a sovereign and secure **AI assistant capable of handling sensitive data**, which will be integrated into our tools.

When a central bank adopts AI, the key question is not just: "which technology performs best?", but also: **"does this technology allow us to retain control over our data and systems?"**.

We handle sensitive information: banking data, prudential data and economic statistics. They must remain protected at all times: no outsiders must be able to access them, and no private or public entity must be able to prevent us from accessing them. However, AI relies heavily on non-European technology components, which creates real risks: dependence on a single supplier, exposure to extraterritorial laws, unilateral price increases, or the discontinuation of an essential service. For a central bank, this poses a **risk of losing its autonomy.**

That is why sovereignty has become a key factor in all our AI decisions

We follow a simple rule: **the more sensitive the data, the more they must remain within our internal infrastructure or on a trusted European cloud.** We are wary of technological lock-in: every solution must be **reversible** and replaceable. Lastly, sovereignty is also about **resilience**: AI is only useful if the infrastructure that supports it remains available, secure and monitored.

In essence, for a central bank, AI is not only a question of innovation: it is a challenge in terms of **autonomy, control and the continuity of its mission.** We must innovate, yes, but never at the expense of our sovereignty.

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SOVEREIGNTY ISSUES AND THEIR IMPACT ON AI DECISIONS

Why sovereignty is central to a central bank

- Infrastructure that is often based outside Europe: operating systems, middleware, cloud platforms, security solutions
- Risks of dependence on a single supplier, exposure to extraterritorial laws, the risk of service disruption, and unilateral price increases — all pose a threat to operational autonomy.

Protecting data

- The more sensitive the data, the more they need to stay within our infrastructures.
- Objective: to ensure confidentiality, legal certainty and continuity.

Minimising technological dependencies and investing in a resilient infrastructure

The ultimate goal: autonomy, continuity, control

- AI is not just about innovation: it is a matter of economic security, data control and business continuity.

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Sovereignty issues and their impact on AI decisions

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Banque de France's Eco Notepad 2026 competition: " Does artificial intelligence jeopardize the energy transition?"

¹ Cerutti et al (2025), The Global Impact of AI: Mind the Gap, *IMF Working Paper 25/76*. [Link](#).

² Aghion et Bunel (2024), AI and Growth: Where Do We Stand?, *Policy note of the San Francisco Fed*. [Link](#).

³ Aghion, P., Bunel, S., Jaravel, X., Mikaelson, T., Roulet, A., & Søgaard, J. (2025). How different uses of AI shape labor demand: evidence from France. In *AEA Papers and Proceedings* (Vol. 115, pp. 62-67). [Link](#).

⁴ [Link](#): "Large retail companies that sell primarily online make extensive use of AI in their price-setting processes." It has been shown that algorithmic price setting by these retailers increases both price uniformity across different sites and the frequency of price changes [...]. 'This could ultimately alter the dynamics of inflation.'

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Updated on the 9th of April 2026