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Artificial Intelligence: friend or foe for banks?

Sam Theodore | February 2024

Artificial intelligence can be a trusted friend to banks that are well advanced, technologically, organisationally and culturally, in the digitalisation process and dismantling burdensome legacy structures. But AI can equally be a foe, deepening the competitive handicap for banks still struggling to move into the digital age.

By this, I do not mean a bank that is digitalising its existing structure and business model. All banks have been doing that for some time. Rather, it is about a bank adjusting its business model through controlled self-disruption of its legacy structure into the digital age.

Focus on the impact of AI surged a year ago after the release of ChatGPT[1], the flagship large language model (LLM) for generative AI. But the use of predictive (pattern recognition) AI by financial actors goes back years and is one component of the digitalisation push in risk management, internal operations, and customer advice.

As far back as 2016, for example, UBS has been using AI programmes to help advise asset-management clients. For banks, the new generative (pattern creation) AI, combined with conversational AI (simulating human conversation by using natural language processing, NLP) is less of a revolution and more of an evolution, albeit one that should be taking place at a rapid clip.

I believe that predictive AI, based both on supervised and increasingly unsupervised machine learning, will continue to remain important for financial institutions. After all, it relates to applications in fraud detection, compliance, market analysis and investment management, loan credit risk scoring and assessment, data security, and in general streamlining middle and back-office operations. Combined with fast-evolving generative AI, it can give a broader dimension to the use of AI within the organisation.

Importantly, the active use of generative AI should also materially enhance the front office, the quality, speed, and effectiveness of customer relationships, all clear wins for customers. Most bank clients these days, both businesses and households, have the main or even unique contact with their bank via smartphone apps (and to a lesser extent via online banking on websites). Banks have been talking for some time about the need to leverage the benefits of digitalisation by moving to customer-centric vs. product-centric strategies. AI-powered chatbots engaging interactively with customers 24/7 using NLP for queries, other services, or financial advice can make this a reality. The competitive advantage for those that succeed are evident.

Global AI ranking of banks: European names well represented

According to research provider CB Insights, the US market accounted for c. 73% of global AI funding last year, thanks largely to the growth of LLM developers like OpenAI, the creator of ChatGPT. Europe comes a distant second, with the UK and France as regional champions. Out of the top 50 publicly-listed technology companies – led by the "Magnificent Seven"[2] – 36 are based in the US and only three (ASML, SAP and Schneider Electric) in Europe. But even though Europe is clearly not where the main action for AI development is taking place, numerous large European banks are very active in exploring AI routes and implementing AI processes.

A November 2023 Evident ranking of 50 large banks (assets over USD 200 bn) from North America, Europe and Asia[3] in terms of AI performance puts JP Morgan at the top, followed by Capital One and Royal Bank of Canada. Of the European banks, UBS is 6th, ING 8th, BNP Paribas 12th, HSBC 13th. In total, 25 European banks are listed in the ranking, surprisingly, just a couple from the Nordic region. The analysis by Evident, an intelligence platform that benchmarks and tracks AI adoption across the financial sector, focuses on four variables: (i) talent capability and

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[1] Initial release on 30 November 2022; stable release on 10 January 2023.
[2] Amazon, Apple, Microsoft, Nvidia, Tesla, Alphabet, Meta.

[3] The ranking excludes banks from Japan, China, and India.

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development; (ii) innovation (research, ventures, etc.); (iii) leadership in comms and strategy; and (iv) transparency of responsible AI activities. The ranking suggests that European institutions well positioned digitally are fully competitive globally in terms of AI usage.

AI regulation in the EU should protect users without hurting innovation

The EU is about to have the most advanced AI regulation in the world. At the end of last year, the AI Act's draft was adopted unanimously by member states. It is expected to become effective in 2025 (more likely in 2026 in my opinion), with various rules kicking in gradually afterwards.

The main component of the AI Act is that businesses using AI in the EU will need to conduct assessments to determine which risk category their systems fall in and comply with regulations, which differ for each category. The AI Act makes a distinction between lower-risk systems, which would be subject mostly to transparency requirements, and high-risk systems, for which strict regulatory constraints would apply. Included in the latter category would be the use of an AI system to determine the credit score of a natural person, or for recruitment. There is also a category of prohibited risks, like real-time biometric identification systems in publicly accessible spaces.

The EU regulation has sometimes been criticised as being unnecessarily restrictive, especially as opposed to the US or the UK where to-date there is no comprehensive AI regulatory project. The US/UK approach is more light-touch, with regulatory guidance industry-led and sector-specific rather than through legislation.

I view positively the EU regulatory approach. Setting up clear rules and delineating conduct responsibilities according to the risk of a specific AI system should provide clarity and predictability to AI actors – both providers and users of AI – whether they are headquartered in the EU or outside it (if the output of their system is used in the EU).

Key benefits of AI for banks

Various AI research and advisory firms highlight the advantages of AI. Below are five key benefits according to Gartner.

1 Automation and efficiency: repetitive tasks can be automated to save time, reduce errors, and increase efficiency.

2 Improved customer service: chatbots and virtual assistants delivering round-the-clock customer support.

3 Cost reduction: significant cost savings by automating tasks thus reducing the need for human resources.

4 Data analysis: analysing vast amounts of data, enabling data-driven decision making, and uncovering trends and insights at speed.

5 Personalisation: algorithms analyse user data to personalise recommendations, content, and customer experience.

Challenges of AI adoption

There remain significant challenges facing banks aiming to expand AI usage. First, lagging technology prevailing in many organisations. As examples, mainframe-legacy IT infrastructure, or a multitude of different IT systems resulting from various phases of consolidation over recent decades. Banks are pursuing cloud transition but legacy systems remain an obstacle, even if temporary.

Second, like many other businesses, banks are sorely lacking sufficient AI intellectual-capital capacity. Some banks are actively pursuing talent-building avenues, for example ING, which sponsors AI education by collaborating with Dutch universities.

Third, the success of AI adoption is dependent on board and top management buy-in. Unlike digital-native fintechs and neobanks, banks with legacy structures and legacy mentalities are not run as tech companies. Perhaps some should try it. Positively, banks like Barclays provide AI training to senior management, a trend that more institutions should adopt on a consistent basis.

Risks related to AI adoption

Cyber risks: AI is supposed to help prevent fraud and cyber risk (often these two go together) by creating more effective and error-free tools. But cyber criminals can also use AI as a weapon, to say nothing about states and state-sponsored actors with hostile intentions. My previous The Wide Angle report highlighted this top cybersecurity risk rising amid the current geopolitical turmoil. As much as enhancing banks' cyber risk combatting capacity, AI can also boost bad actors' cybercrime effectiveness.

AI bias: This is another risk flagged by experts, especially in the earlier phases of AI adoption by an organisation. Specifically, AI systems are built by people who, perhaps unintentionally, may bring their own biases and assumptions into the training of the AI model. This could create a built-in machine-learning bias that could affect future decision-making, leading to "hallucinations" – incorrect predictions, false positives, or false negatives.

Explanation ability and ethics: This is the risk of the inherent difficulty of explaining potentially unfavourable AI decisions to users and the ethical aspects related to that. For example, a bank declining a loan to a customer could have difficulty explaining why and how the decision was taken. A deep learning neural network like an LLM operates through an extremely fine-tuned correlation among thousands of variables, not easily comprehensible to an untrained human brain, which could view it as a black box.

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Customer mistrust: Related to the above, there is always the risk that if an AI interlocutor like a chatbot provides an erroneous or questionable decision, ensuing customer mistrust could lead to a more general loss of confidence in the bank's AI systems, negatively impacting the bank's overall image. Equally, customers could legitimately question the validity and objectivity of data sets obtained from the internet.

The impact of AI on the financial sector's workforce

The use of AI tools in customer relations does not mean that robots will replace humans. Bank strategies do not call for that. In fact they explicitly exclude this scenario, which in any event would not be socially and ethically acceptable. They only mention the benefits of AI assistants to human customer relations reps or financial advisors, not the replacement of the latter. Indeed, in a recent report, the IBM Institute for Business Value highlights that, following a survey of 12,000 bank customers worldwide, a majority would prefer the formula of AI assistance to a human, vs. the human being replaced by AI.

Financial institutions avoid being too specific about such sensitive aspects, not least because the picture is still very cloudy and uncertain for most. But many in the market – analysts, consultants, and some employers as well – are pointing to the use of AI as a cost-reduction driver. AI-driven cost cutting is flagged as more reachable than the vaguer and longer-term AI-driven boost to revenues.

In a recently-published report that received substantial media coverage, the Burning Glass Institute assessed in detail the potential impact of AI use on the workforce. The analysis is based on US data but it is safe to assume that,

with a possible time lag, some of the outcomes will be visible in Europe as well. In a nutshell, the report points out that the impact of AI will be less about automating away tasks than about augmenting workforce productivity.

Nevertheless, it adds that workforce reductions could become widespread over the coming decade, not driven by machines replacing humans but by material AI-driven leaps in productivity that in time will require less staff. The report notes that unlike in the past, when mechanisation replaced physical labour, "AI will have the greatest impact on high-skilled, professional work – the kinds of roles that define the 21st-century knowledge economy and that have long been considered safe havens from roboticization".

In terms of repercussions on economic sectors, the report puts financial services, professional services, and information systems as the highest at risk. Especially jobs involving repetitive tasks or crunching numbers, analysing market trends, or creating predictive models, which can all be streamlined by AI. Professions at risk in the financial sector include financial analysts, actuaries, credit controllers, and accountants.

Analyst
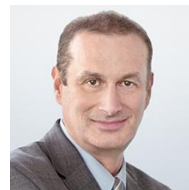
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