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Rethinking Profitability and Trust in the Sustainable Finance Implications of Agentic AI

SUMMARY

This study examines the ambivalent effects of agentic artificial intelligence (Agentic AI) on the sustainable financial sector. The analysis shows that these systems not only respond to user needs, but are also capable of proactively making financial decisions, ushering in a new era in banking services (McKinsey & Company, 2025). Agentic AI offers significant efficiency gains, cost reductions and a personalised customer experience (EY, 2023a; Deloitte, 2025), while also enabling greener operations through process optimisation and reduced resource use. At the same time, it carries new ethical, regulatory and technological risks. The opacity of algorithms (“black box”), discriminatory biases and data protection vulnerabilities can undermine user confidence and, if left unchecked, threaten both financial resilience and the broader sustainability of the sector (Körber, 2019; Ryan, 2020; Lendvai & Gosztonyi, 2025). Particular attention should be paid to the erosion of the “inertia dividend”, which signals the gradual disappearance of bank profits derived from customer passivity. Through real-time optimisation by AI agents, customer funds automatically flow into more favourable and often more sustainable financial structures, eliminating banks’ hidden sources of profit (Boston Consulting Group, 2025). This process will lead to a decline in net interest margins and card business revenues, as well as the transformation of loyalty-based customer relationships into performance-driven models that reward transparency and responsibility (Financial Times, 2024; McKinsey & Company, 2025). In the longer term, Agentic AI will create a new business logic in which algorithms stand at the centre of customer relationships. This will result in a more dynamic, transparent, but also more vulnerable competitive market. The concentration of technological dependence, algorithmic homogeneity and regulatory asymmetries pose significant systemic risks, including sustainability risks related to resilience, inclusion and the environmental footprint of digital infrastructures (FSB, 2024; IOSCO, 2025; ECB, 2024b). The study concludes that banks must adapt by developing sustainable and resilient revenue models, while regulators need to establish stricter transparency and supervisory frameworks. Only through such measures can artificial intelligence support efficiency, innovation, and long-term financial stability in a manner that is consistent with

environmental, social and governance (ESG) objectives and broader sustainability requirements.

Keywords: agentic artificial intelligence; sustainable finance; inertia yield; profitability transformation; regulation and risk; customer trust

JEL codes: G21, G28, O33, Q01

INTRODUCTION

The application of artificial intelligence (AI) in the financial sector has become one of the key drivers of digital transformation in recent years. While previous technological innovations – such as blockchain, cloud computing and instant payment systems – were primarily aimed at increasing efficiency and accelerating data processing, the emergence of AI promises deeper and more systemic changes with long-term implications not only for financial performance but also for resilience and sustainability (McKinsey & Company, 2023; OECD/INFE, 2022). It is therefore understandable that Andrew Ng, a world-renowned expert at Stanford University, aptly described this emerging technology years ago as “artificial intelligence is the new electricity” (Ng, 2017). This analogy highlights that AI is not just a novel combination of algorithms, but a universal infrastructure that is set to permeate economic, social, and increasingly environmental processes. This is particularly evident in the financial sector, where banks, insurance companies, investment service providers and new financial players (such as FinTech and BigTech companies) are already widely using AI to perform several vital tasks. Beyond efficiency gains, such applications also contribute to operational sustainability through smarter resource allocation and reduced redundancies. The real breakthrough, however, is that AI provides more accurate predictions through intelligent data processing and predictive analytics, effectively filters out fraud and manages risks in real time. It offers fast and continuous support for automated customer service (chatbots, voicebots), while personalised advisory systems, robo-advisors and advanced credit assessment algorithms raise both customer experience and operational sustainability to new levels. Behavioural analysis, targeted marketing and crypto investments could become key areas of future financial strategies, provided these are aligned with responsible innovation principles. The emergence of agentic AI marks a new phase in the development of artificial intelligence. These systems no longer simply respond to user requests but are able to proactively make financial decisions and execute complex processes – even without conscious user intervention (McKinsey & Company, 2025). This shift appears to herald a new business model, where autonomous AI agents

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could become the focus of banking relationships. Such a development has the potential to radically transform the sector's traditional revenue structures, while also creating opportunities for aligning financial operations with broader ESG and sustainability requirements in a more implicit but increasingly tangible way.

The aim of this study is to provide a comprehensive overview of the opportunities and risks that artificial intelligence, and agent systems in particular, present for financial service providers and banks. Particular attention is paid to the phenomenon of the "inertia dividend", i.e. the hidden source of profit that stems from customer passivity and which could be fundamentally and permanently eroded by the operation of AI agents. This erosion may also force institutions to design business models that are not only profitable, but also more transparent, inclusive, and sustainable in the long run.

EFFICIENCY, INCLUSION AND ESG-DRIVEN OPPORTUNITIES THROUGH AI

One of the most obvious benefits of AI for financial institutions is automation. Automating routine administrative tasks such as transaction processing, regulatory reporting, and fraud prevention controls can result in significant cost savings (Deloitte, 2025), with some estimates suggesting that the widespread use of artificial intelligence could generate USD 200–340 billion annually in the global financial sector (McKinsey & Company, 2023). Beyond pure efficiency, automation also reduces unnecessary resource use and operational redundancies, thereby indirectly supporting more sustainable business practices. Accurate risk assessment has always been a priority for financial institutions. AI predictive algorithms are capable of processing and analysing vast amounts of often unstructured data in real time, such as customer behaviour patterns, transaction histories and macroeconomic trends. This enables service providers to identify risks early on and thus take preventive measures quickly (OECD/INFE, 2022). From a sustainability perspective, the ability to anticipate risks more effectively strengthens financial resilience, which is a key dimension of long-term systemic stability. One of the most valuable benefits of AI is the personalisation of the customer experience. Robo-advisors and digital advisors are now able to recommend tailored investment portfolios based on users' financial awareness and risk profiles (e.g. Capponi et al., 2019; Alsabab et al., 2019). Google Gemini and other advanced AI platforms are able to monitor prices in real time and automatically optimise offers (EY, 2023b). This creates higher customer retention and new revenue opportunities on the service provider side, while enabling investment strategies that can be better aligned with ESG criteria and individual sustainability preferences. AI can also be a major step forward in the area of inclusive financial services. For user groups with low financial literacy or limited access to banking, AI-based services provide faster, easier and cheaper access to basic financial products (Bagó, 2023; OECD & FSB, 2024). This is particularly important in developing countries, where digital wallets and peer-to-peer lending platforms are rapidly expanding financial coverage. By broadening access to financial services, AI not only supports economic inclusion but also contributes to the social sustainability of financial systems, helping to reduce inequalities and foster more balanced development.

TRANSPARENCY, BIAS AND REGULATORY CHALLENGES IN RESPONSIBLE AI ADOPTION

One of the main criticisms of AI systems is that their operation is often opaque. Users – and often the service providers themselves – find it difficult to understand the logic behind the decisions. This "black box" phenomenon can easily undermine trust, especially in the case of financial decisions, where transparency is traditionally a fundamental requirement for long-term system sustainability (Körber, 2019; Ryan, 2020). Biases in algorithms – such as discrimination against certain social groups – pose further serious ethical and legal challenges (Lendvai & Gosztanyi, 2025). This can be particularly dangerous in the financial sector, as discrimination in credit assessments or insurance decisions can result in systemic exclusion for certain players. From a sustainability perspective, such exclusion contradicts the principle of social inclusion, which is a cornerstone of resilient financial systems. It is also important to note that AI requires vast amounts of data to function, which in turn makes financial institutions an attractive target for cyber attackers. The protection of sensitive customer data, GDPR compliance and the implementation of zero-trust architectures are therefore essential for the responsible and sustainable use of AI by financial institutions (ECB, 2024a). A lack of robust cybersecurity would not only endanger individual customers, but also the overall stability and sustainability of financial markets. Furthermore, the European Union's Artificial Intelligence Regulation (EU AI Act) classifies AI agents as "high risk", imposing strict compliance requirements on operators (European Commission, 2024). Ensuring mandatory explainability, auditability and human oversight require significant resources and may slow down the introduction of innovation. At the same time, these requirements are also intended to ensure that the deployment of AI is aligned with sustainability imperatives, particularly in terms of fairness, accountability and resilience.

ERODING MARGINS AND THE EMERGENCE OF SUSTAINABLE REVENUE MODELS

The use of artificial intelligence will undoubtedly have a positive impact on the operations of banks and financial service providers in the short term, as automated systems reduce operating costs, make risk management more accurate, and speed up transaction processing. According to KPMG's analysis, the introduction of artificial intelligence can yield spectacular results even in the short term: more than half of retail companies achieved a return on investment of over 10% (KPMG, 2025a), while GenAI solutions promise an average profit increase of around 10.7% and a 19–23% reduction in labour costs at the corporate level (KPMG, 2025b). However, according to the latest research by the IBM Institute for Business Value, only about a quarter of AI initiatives deliver the expected results, while the average return on scaled projects is only around 7% (IBM, 2025; IBM Institute for Business Value, 2025). This suggests that although AI has enormous potential for efficiency gains, it can only be fully exploited if the appropriate data infrastructure is in place, regulatory compliance is ensured, and effective organisational-level integration takes place. Ensuring that these efficiency gains also support broader sustainability goals – such as greener operations, responsible employment practices and resilient infrastructures – will be equally important. In the longer term, however, the structure of profitability may undergo

significant transformation due to the increasing prevalence of AI in the financial ecosystem, as traditional sources of revenue weaken and competitive market pressures intensify (McKinsey & Company, 2025). One of the most important pillars of banking revenue is net interest income (NII), which is the difference between interest earned on loans and interest paid on deposits. However, with the advent of artificial intelligence systems, customers can more easily find more favourable interest rates, as the software is able to compare different offers in real time. This process directly reduces the net interest margin (NIM), which was previously one of the main sources of bank profits. A similar effect can be observed in the bank card business. Revenues from consumer card use – such as transaction fees, interest income and profits from unused reward programmes – have been a stable source of profit for banks for decades. However, AI is capable of optimising card usage, requesting new cards on behalf of users, or automatically selecting payment solutions that circumvent traditional commissions. This trend could even be one of the main drivers of a long-term decline in revenue (CFPB, 2024; McKinsey & Company, 2025). With the spread of agency systems, price competition will eventually extend to all financial service providers. In the case of payment service providers, AI is capable of putting providers in real-time competition with each other, so that only the most favourable offers come to the fore. This forces providers to continuously optimise their fee structures, which gradually reduces the profit margins that were previously the norm (Financial Times, 2024). While this intensifies competitive pressure, it also opens the door to service innovation, where ESG-compliant products, ethical investment opportunities and sustainable financial instruments may gain prominence as differentiators in a crowded market.

The technological foundations are already in place, and several FinTech companies – Griffin, for example – have begun to develop banking systems centred on autonomous AI agents that control customer relationships and financial processes (Griffin, 2025; Finextra, 2025; Maddyness, 2024). Traditional banks therefore face the urgent task of assessing which of their revenue streams may be vulnerable and what strategies they can use to remain competitive in an environment where financial decisions are increasingly mediated by artificial intelligence (McKinsey & Company, 2025). To remain relevant, they will not only need to protect profitability but also align their strategies with the sustainability imperatives of the evolving financial ecosystem.

FROM INERTIA YIELDS TO ESG-ORIENTED CUSTOMER OPTIMISATION

One of the least visible yet extremely important sources of income for banks is the implicit profit arising from customer passivity, known in the literature as the “inertia yield” (Boston Consulting Group, 2025). This return stems from the fact that customers often fail to optimise their savings or loan terms but remain in less advantageous arrangements out of habit and often due to a lack of information or awareness. Customer passivity and implicit bank profits are closely related to the level of financial literacy, as customers with lower levels of knowledge often fail to optimise their savings or loan terms, remaining in suboptimal arrangements out of habit. International research consistently highlights that financial literacy varies

significantly from country to country, which directly affects customers’ decision-making abilities. According to the OECD/INFE 2023 survey, the majority of the adult population in the 39 countries surveyed does not meet the minimum level of financial literacy required to make informed financial decisions (OECD, 2023). The results of PISA 2022 also show that a significant proportion of young people lack basic financial skills, which increases financial vulnerability in the long term (OECD PISA, 2022). Further research has confirmed that financial literacy and digital skills together determine how consciously and effectively consumers use modern financial services, while financial attitudes and personality traits prove to be key factors in whether individuals are able to actively apply their existing knowledge in practice (Sárközy, 2024; Kálmán & Németh, 2024). International experience also shows that customer inactivity is particularly pronounced among lower-income and lower-educated groups, further increasing banks’ implicit profits through “inertia returns” (Campbell et al., 2016). However, artificial intelligence agent systems fundamentally disrupt this logic. Instead of customers keeping their savings in low-interest accounts for long periods of time, AI agents automatically transfer funds to products offering the highest interest rates. Similarly, credit cards and instalment payments are subject to continuous optimisation, so banks lose the hidden advantage that customer inactivity previously provided them with (McKinsey & Company, 2025). From a sustainability perspective, this shift has the potential to democratise access to better financial opportunities and reduce structural inequalities, aligning customer optimisation with social sustainability goals. International examples clearly illustrate the dynamics of change. In the spring of 2018, the Chinese Yu’e Bao money market fund attracted USD 268 billion in investments in a short period of time, as customers were able to easily transfer their savings to higher-yielding products. In Europe, Raisin managed approximately €57 billion in deposits by 2024 (McKinsey & Company, 2025), while the British companies Flagstone and Hargreaves Lansdown Active Savings integrated dozens of banking offers into a single platform, enabling quick switching. These examples suggest that, with the right technological background, customers are willing to move towards financial optimisation (Financial Times, 2024; Forbes Advisor UK, 2024). In addition, the growing availability of ESG-labelled and green financial products means that AI-driven optimisation may increasingly channel customer funds into more sustainable investment opportunities. In the world of credit cards, unredeemed points and discounts have so far represented a significant hidden source of income for banks. According to data from the Consumer Financial Protection Bureau, more than 20% of cardholders do not redeem their reward points at all, and the expiry of points or account closure causes further losses for customers (CFPB, 2024). However, AI will be able to use these points automatically and in real time, eliminating this passive source of revenue for the banking system. The radical reduction (restructuring) of profits from passive customer behaviour will lead to a fundamental transformation of banking business models. Whereas loyalty and habit previously maintained the revenue base, performance-driven customer behaviour will become the determining factor in the future. Financial service providers will need to develop new strategies that focus not only on transparency, customer ex-

perience and innovation, but also on aligning products with sustainability preferences and socially responsible investment choices (Griffin, 2025; Finextra, 2025).

SYSTEMIC RISKS, ALGORITHMIC HOMOGENEITY AND THE SUSTAINABILITY IMPERATIVE

In the longer term, the rise of artificial intelligence will not only transform operational efficiency and the structure of revenue streams but also create a new business logic. Customer relationships will increasingly be centred on autonomous agent systems, which will function not as simple tools, but as active participants in the banking ecosystem. One of the most important consequences is the gradual weakening of customer loyalty. While loyalty and habit played a decisive role in traditional banking, performance-driven behaviour is becoming dominant in an AI-supported environment. In the future, customers will no longer be tied to a particular bank brand or tradition, but to the service provider that offers the best terms at any given moment (Boston Consulting Group, 2025). In the long term, this change could result in a more dynamic but unstable competitive market, where banks will have to maintain their market relevance through continuous innovation. In terms of business models, the future therefore points towards a so-called *agent-first approach*, which focuses on artificial intelligence agents (Griffin, 2025; Maddyness, 2024). These systems not only mediate financial decisions but are deeply embedded in the infrastructure of service providers, fundamentally changing banks' customer relationship strategies. This also means that the pricing of traditional banking products, such as deposits and loans, will become much more transparent, and the hidden reserves and extra costs that previously formed the basis of profitability will disappear.

The spread of artificial intelligence is not only transforming the day-to-day operations of financial institutions but also having a profound impact on the macroeconomic environment. The technology contributes to increasing the efficiency of financial markets and reducing information asymmetries, but it can also open new risk dimensions that could threaten global financial stability in the long term. Both the OECD (2023) and the European Central Bank (2024) emphasise that without a strengthened regulatory framework, the use of AI can easily generate systemic risks. When market participants widely use identical or similar AI models, their decisions may be highly correlated with each other (), which is why one of the greatest threats is the phenomenon of *algorithmic homogeneity*. In stressful situations, this synchronisation can lead to bubbles or crashes, which the literature describes as an 'amplification of herd behaviour', as pointed out by IOSCO (2025). With the widespread adoption of AI-based trading systems, there is an increased risk that market participants will move in the same direction at the same time, amplifying volatility and procyclical effects at the macro level (IOSCO, 2025). Another source of systemic risk is technological concentration. The financial sector is increasingly reliant on a few global providers that supply cloud infrastructure and AI-based solutions. This dependence means that an operational failure or regulatory conflict involving a single provider could trigger a systemic shock. The Financial Stability Board (2024) analysis highlights that increasing concentration in key areas of the AI ecosystem, such as the markets for hardware, cloud services or language models, makes financial

intermediation more vulnerable. The European Central Bank (ECB, 2024b) also warns that excessive dependence on a few dominant technology companies brings with it a new form of the 'too-big-to-fail' problem, but now on the part of technology players rather than financial ones. In addition, the regulatory environment is developing at very different rates globally with regard to artificial intelligence, which is another source of uncertainty. The European Union's AI Act, for example, classifies AI systems used in the financial sector as high-risk and imposes transparency, auditability and human oversight requirements (European Commission, 2024). However, other regions have less stringent regulations, which is causing regulatory asymmetry to increase. According to the EBA (2023), this fragmented regulation can lead to distorted competition, a lack of international coherence and increased regulatory arbitrage, while slowing down safe innovation. The macroeconomic importance of *trust* cannot be underestimated either. The willingness of consumers and investors to use AI systems depends largely on how safe and transparent they are perceived to be. Ryan (2020) emphasises that the use of AI can only gain broad social acceptance if transparency and ethical reliability are ensured. Körber (2019) also explains in his study that user trust depends largely on the control and transparency mechanisms built into the system, which is why one dimension of his scale for measuring trust is related to the existence of control mechanisms. A serious data protection incident or algorithmic bias can be enough to suddenly undermine trust, which has a direct impact on capital markets and financial stability. *Zero-trust architectures* and explainable AI (XAI) solutions are therefore not only technological innovations but also macroeconomic stability tools, as they increase transparency and accountability. Finally, changes in human behaviour also pose systemic risks. Excessive reliance on automation and the transfer of responsibility for decisions reduce professional control and weaken accountability. If financial decision-makers and customers uncritically accept the results generated by AI, the effects of flawed or distorted models can spread widely. According to the European Central Bank (2024), it is therefore essential that human control and professional supervision always remain in place over decisions made by AI. It is clear, therefore, that artificial intelligence can offer significant benefits as a means of increasing the efficiency of the financial sector (), but it also carries serious systemic risks. In order to maintain macroeconomic stability, it is essential to harmonise regulatory frameworks, reduce technological concentration and strengthen user confidence. Without these factors, the spread of AI could easily become a catalyst for new types of crises in the financial sector.

BALANCING INNOVATION, TRUST AND SUSTAINABLE FINANCE IN THE AGE OF AI

The application of artificial intelligence and agent systems in the financial sector carries both enormous opportunities and serious risks. Based on the findings of the study, the following conclusions can be drawn. First, it can be stated that AI undoubtedly results in significant efficiency gains and cost reductions in the short term. Predictive analytics, automated fraud prevention and personalised customer experience provide banks with a significant competitive advantage. Secondly, it is clear that the structure of profitability is undergoing a fundamental transformation. Net interest margins and card

business revenues will inevitably erode as AI agents eliminate the implicit profits derived from customer passivity. Thus, the “inertia yield” will gradually disappear, forcing banks to develop new revenue models. Thirdly, it must be emphasised that trust and regulatory compliance are key. Customers will only widely accept AI-based systems if they clearly understand the decision-making mechanisms and feel confident that their data is protected. The EU AI Act provides a decisive framework for European Member States in this regard, but further challenges are expected in its practical implementation (European Commission, 2024). These trends suggest that banks urgently need to strengthen their customer experience, which includes personalised services, fast and secure digital transactions, and transparent pricing. Innovation strategies should also focus more on alternative revenue streams, such as data-driven services, premium experiences and sustainable financial products. In addition, cybersecurity and ethical data management must become a top priority in the future, as they are the foundation of long-term trust. It is also important for regulatory authorities to provide a framework that both encourages innovation and protects consumers in order to maintain user trust. Regulators need to pay particular attention to preventing algorithmic bias, ensuring transparency and managing cyber risks. Macro-level cooperation between regulators, market participants and technology companies is essential to ensure that the spread of AI does not jeopardise financial stability.

Overall, artificial intelligence represents one of the most important areas of innovation in the financial sector. However, striking a balance between exploiting opportunities and managing risks poses a formidable challenge for banks, regulators and users alike. The financial ecosystem of the future will undoubtedly be much more dynamic and transparent, but it can only remain sustainable if stakeholders are able to manage the new dynamics of trust and profitability.

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