AIFS0018

Written evidence submitted by Revolut

Executive Summary

Revolut welcomes the opportunity to respond to the Treasury Committee's Call for Evidence on AI in Financial services. As a leading FinTech company at the cutting edge of digital innovation, Revolut brings firsthand insights on the use of AI in financial services and the key drivers of growth in the sector. AI offers Revolut transformative potential within financial services, promising advancements from fraud detection and streamlined customer service to sophisticated trading algorithms and personalised financial products. Over the next decade, adoption will likely intensify, driven by technological advances such as generative AI and more powerful machine learning models. Regulatory support, including sandboxes and evolving frameworks, as well as consumer demand for convenience and personalisation will also need to be considered.

Realising these gains responsibly requires addressing data privacy, bias, and explainability challenges through robust regulations and internal governance. Systemic risks, including cybersecurity threats, third-party dependencies, and herding behaviour, necessitate careful mitigation strategies. For us, talent development in AI and data science remains vital for both industry and regulators. Regulatory clarity and balanced oversight will be key to furthering innovation while safeguarding consumers and ensuring financial stability.

We believe the UK, with its strong FinTech ecosystem and proactive regulatory environment, is well-positioned to lead in AI-driven financial services. It will face ongoing competition from global peers. Collaboration among financial institutions, technology providers, regulators, and consumer advocates will be crucial in ensuring that AI adoption yields equitable, transparent, and stable outcomes for the financial sector and its customers.

Revolut is committed to long-term investment in AI research and development to drive innovation and enhance customer experiences. Our experience and insights uniquely position us to provide fresh perspectives on how regulatory frameworks can effectively support growth and innovation within the financial services sector. The UK has long been recognised as a global leader in financial services, and the rapid evolution of technology presents both challenges and opportunities. At Revolut, we want to emphasise the importance of regulatory adaptability to foster an environment conducive to innovation while also building the prestige of its financial services sector.

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Response to the questions asked in the Call for Evidence

1. **How is AI currently used in different sectors of financial services and how is this likely to change over the next ten years? This may include:**
   - **Are there particular areas of financial services that are adopting AI more quickly and at higher rates of penetration than others?**
   - **Are Fintech firms better suited to adopting AI? What percentage of trading is driven by algorithms/artificial intelligence?**
   - **Are financial services adopting AI at a faster rate than other sectors in the economy?**

AI is increasingly integrated into financial services for tasks such as fraud detection, customer support via chatbots, risk management, algorithmic trading, personalised financial insights, underwriting, claims processing, portfolio optimisation, clearing and settlement, and market surveillance. At Revolut, chatbots and virtual assistants efficiently manage routine inquiries, escalating more complex issues to human agents. Natural language processing tools help with basic troubleshooting and account inquiries, while AI-driven systems automate repetitive back-office tasks like Know-Your-Customer checks, document review, and contract analysis..

Over the next ten years, we anticipate that AI will drive greater personalisation of financial products, expand into areas like autonomous decision-making such as automated portfolio rebalancing, and integrate seamlessly with other technologies, including blockchain. Adoption rates of AI are notably higher among high-frequency trading firms, digital-first banks, and FinTech companies like ours. Fraud detection and compliance are also experiencing rapid AI adoption, due to increasing threats and stricter regulatory scrutiny. Estimates suggest that algorithmic trading accounts for a substantial portion of equity trading volume, with some reports indicating figures ranging from 60% to 80% in major global exchanges,, which will include AI-driven models, and this number is only expected to increase.

Financial services are adopting AI at a rapid pace, often at a faster rate than other sectors in the economy, due to the industry's data-intensive nature and the critical role technology plays in driving efficiency and innovation. FinTech firms like Revolut, with more agile infrastructure, fewer legacy systems, and a culture of rapid prototyping and innovation, are also often quicker to adopt AI when compared to traditional firms.Traditional financial institutions still hold significant advantages, such as large, diverse data sets, established brand trust, and substantial resources to collaborate with leading AI vendors. These strengths enable them to integrate cutting-edge technologies like foundation models and advanced AI algorithms into their operations. Once they overcome legacy system hurdles, these firms can scale AI solutions across their vast customer bases, unlocking new levels of automation, personalisation, and predictive analytics.

This swift adoption is particularly evident in areas such as fraud detection, algorithmic trading, and customer service, where the immediate benefits of AI—such as enhanced accuracy, speed, and customer experience—are highly valued. While sectors like healthcare

and retail are also accelerating their AI adoption, financial services often lead in terms of integrating complex AI solutions due to the critical need for real-time decision-making and compliance. The intense regulatory scrutiny within finance pushes firms to embrace AI for compliance, risk management, and operational efficiency, giving them a competitive edge in adopting AI technologies compared to other industries.

As a result, financial services are not just keeping pace with other sectors—they are often at the forefront of AI innovation, particularly in areas requiring large-scale data processing, security, and regulatory adherence. The combination of financial firms' existing infrastructure, the drive for technological advancement, and the scale at which they can deploy AI solutions positions the sector to continue leading AI adoption across the economy.

2. **To what extent can AI improve productivity in financial services? This may include:**
   - **Where are the best use cases for AI? Which particular transactions may benefit from AI?**
   - **What are the key barriers to adoption of AI in financial services?**
   - **Are there areas where the financial services should be adopting GenAI with little or no risk?**
   - **Are there likely to be job losses arising from AI in financial services and if so, where?**
   - **Is the UK's financial sector well-placed to take advantage of AI in financial services compared to other countries?**

AI excels at automating repetitive tasks like data entry, document processing, and customer inquiries. This frees up human employees for higher-value activities. Some of the most promising use cases include automating onboarding and compliance checks, enhancing risk modelling, and improving customer support through AI-driven tools. Key financial transactions benefiting from AI include payments, investment, and lending. For example, AI enhances fraud detection, dynamic credit risk scoring, and transaction monitoring in payments. In investment, AI supports automated portfolio rebalancing and data-driven decision-making. In lending, AI can streamline processes by analysing vast amounts of data in real time to provide instant credit decisions.

The adoption of AI in financial services faces several barriers in the UK. Regulatory complexity is one of the primary challenges, as firms must navigate ever-evolving regulations to ensure compliance with AI applications. Many financial institutions rely on legacy systems, making integration with new AI technologies difficult. There's also a shortage of AI talent, particularly in fields like data science, AI ethics, and model validation, as well as challenges related to data availability and quality. AI models require high-quality, structured data, which is not always readily available or well-maintained in some financial institutions.

Despite these challenges, there are areas where the adoption of Generative AI presents low risks. Internal knowledge management is one such area, as AI can organise and process large volumes of internal data, improving accessibility and efficiency. GenAI can also be

leveraged in marketing and communications, where it can assist in content creation or respond to inquiries, with human oversight to ensure accuracy. AI can aid in preliminary data exploration, identifying insights from large datasets, though human oversight remains essential to validate the relevance and quality of the findings.

While AI will automate many functions, potentially leading to job losses in areas like front-line customer support and back-office operations, it is also expected to create new roles. These roles will focus on AI governance, ensuring transparency, ethics, and compliance; model validation, ensuring AI models remain accurate and fair; data engineering, managing and preparing data for AI applications; and ethical oversight, addressing concerns around bias and fairness in AI usage.

The UK is well-positioned to take advantage of AI in financial services, with a strong regulatory framework, a deep talent pool, and a vibrant FinTech ecosystem. The Financial Conduct Authority facilitates innovation through initiatives like regulatory sandboxes and workshops, giving UK-based firms a competitive edge in AI adoption. While countries like the US, with its dominant tech ecosystem, China, with its rapid tech adoption, and parts of the EU, with their large consumer bases, are strong competitors, the UK's balanced regulatory approach, access to talent, and clear data policies provide it with an opportunity to lead in AI-driven financial services. With a focus on nurturing talent, data frameworks, and policy clarity, the UK can maintain a competitive advantage in the global AI race.

3. **What are the risks to financial stability arising from AI and how can they be mitigated? This may include:**
   - **Does AI increase the risks relating to cybersecurity?**
   - **What are the risks around third-party dependencies, model complexity, and embedded or 'hidden' models?**
   - **How significant are the risks of GenAI hallucination and herding behaviour?**
   - **Are the risks of having AI tools used in the financial sector concentrated in the hands of a few large tech companies? To what extent do the AI financial market tools rely on social media outlets? E.g. trading algorithms using social media posts?**

AI introduces several risks to financial stability, particularly in cybersecurity. As AI systems become more integral to financial operations, they also open the door to AI-driven attacks that could potentially disrupt markets, compromise data security, or enable sophisticated fraud. The reliance on third-party AI vendors exacerbates concentration risks, as a small number of providers control critical AI infrastructure, creating systemic risks if these companies face disruptions or security breaches. The increasing complexity of AI models, including "hidden" or poorly understood models, can lead to unforeseen consequences, as some financial institutions play catchup to fully grasp the functioning or limitations of the AI tools they deploy.

Another significant concern is the risk of decision-making errors caused by AI hallucinations, which are factually incorrect or misleading outputs generated by AI systems that appear plausible, particularly in GenAI. Such hallucinations could lead to poor investment choices, inaccurate financial forecasting, or flawed risk assessments. Underlying causes include

gaps or inconsistencies in the data, inherited biases that lead to skewed outputs, and the model memorising training data rather than generalising. Lack of real world understanding means the GenAI models do not understand the world in the way that people do, and therefore can make mistakes that a human would not. Herding behaviour, where multiple AI models make similar decisions based on identical or similar data, could amplify market volatility by leading to uniform actions that destabilise markets. To mitigate these risks, regulatory oversight in partnership with the sector, comprehensive stress testing, and model governance frameworks are essential, along with operational resilience practices such as the Digital Operational Resilience Act to ensure financial systems can withstand disruptions.

The concentration of AI tools in the hands of a few large tech companies also raises concerns, as this centralisation could limit competition and innovation while creating potential vulnerabilities if these providers face issues. Some AI-driven trading algorithms incorporate sentiment analysis from social media outlets to inform decisions, adding a layer of complexity to the financial ecosystem. While social media can provide real-time insights into market sentiment, this area is still evolving and presents challenges in terms of accuracy and the potential for manipulation. Mitigating these risks requires diversification of AI vendors, careful regulatory oversight, and robust frameworks for model validation and transparency.

4. **What are the benefits and risks to consumers arising from AI, particularly for vulnerable consumers? This may include:**
   - **What benefits to consumers might arise from using AI in financial services? For example, could AI be used to identify and provide greater assistance to vulnerable consumers?**
   - **What is the risk of AI increasing embedded bias? Is AI likely to be more biased than humans?**
   - **What data sharing would be needed to make AI more effective in financial services, and will there be a need for legislative change to achieve that?**
   - **Are there any current or future concerns around data protection and AI in financial services?**
   - **What sort of safeguards need to be in place to protect customer data and prevent bias?**

AI in financial services offers several benefits to consumers, particularly in terms of personalised products, enhanced accessibility, and improved customer support. AI can help tailor financial products to individual needs and preferences, improving overall customer experience. AI can identify potentially vulnerable consumers early, offering greater assistance or intervention, particularly in cases of financial difficulties or fraud. AI can analyse transaction data, account activity, and customer interactions to identify patterns indicative of potential vulnerability. By analysing patterns in data, AI can spot signs of distress or vulnerability, allowing financial institutions to provide timely support to those in need. We always conduct and carefully examine substantial testing, both internally and in size-restricted external pre-launch environments. We incorporate the resulting feedback to improve the model and ensure conduct risks are minimised. However, we recognise the ethical implications of this technology and prioritise data privacy and transparency. We

maintain human oversight to ensure that AI-driven interventions are appropriate and respectful.

There are also risks associated with AI, particularly when it comes to bias. AI systems can inadvertently amplify existing biases if they are trained on biased data, which can lead to unfair outcomes for certain groups of consumers. Bias can stem from historical data reflecting existing societal biases; choosing variables that disproportionately impact certain groups, and the inherent assumptions and priorities of the model. While AI is not inherently more biased than humans, its ability to scale and automate decision-making means that any biases present in the data can be perpetuated and even magnified. The opacity of some AI models raises concerns about the explainability of decisions, which can result in consumers being affected by automated advice or decisions they do not fully understand. Over-reliance on AI for financial advice or decision-making can also pose risks, as it cannot always take into account the full context of an individual's situation.

To make AI more effective in financial services, broader data sharing is necessary. For example, access to data such as credit histories and transaction data would allow AI systems to make more accurate and informed decisions. Frameworks like Open Finance could facilitate this, but such data sharing must be balanced with strong data protection measures. Regulations like GDPR play a crucial role in ensuring consumer data is handled responsibly, though they can also create challenges in data sharing. To ensure fairness and transparency, AI models must meet explainability and fairness requirements. Safeguards like bias audits, explainability protocols, and human oversight are essential to protect consumer interests, prevent discrimination, and ensure AI operates in a responsible, ethical manner.

5. **How can Government and financial regulators strike the right balance between seizing the opportunities of AI but at the same time protecting consumers and mitigating against any threats to financial stability? This may include:**

- **Are new regulations needed or do existing regulations need to be modified because of AI?**
- **Will Government and regulators need additional information, resources or expertise to help monitor, support and regulate AI implementation in financial services?**

Government and financial regulators in the UK must strike a careful balance between leveraging the opportunities AI offers and safeguarding consumers while ensuring financial stability. Existing regulations and frameworks are likely to require modification or supplementation to address AI-specific risks, such as algorithmic bias, cybersecurity threats, and potential market disruptions. Current fraud detection regulations need updating to include guidelines for validating AI models and addressing false positives, while KYC/AML frameworks require standards for AI-driven checks, including data quality and bias detection. Algorithmic trading rules must account for AI's adaptability, mandating stress testing and preventing market-destabilising herding behaviour. Consumer protection regulations need to address AI-driven personalisation, and data protection regulations like GDPR require specific guidance for AI training data and cybersecurity. Finally, model validation frameworks must expand to cover AI model complexities, ensuring fairness,

explainability, and ongoing monitoring. While core principles like consumer protection and financial stability remain crucial, regulations must evolve to cover the unique challenges posed by AI technologies in financial services, such as transparency, accountability, and explainability of AI decisions. A hybrid regulatory approach, combining both principles-based frameworks and more prescriptive elements, could be the most effective way to provide flexibility while ensuring robust oversight.

To regulate AI effectively, government bodies and regulators will need additional resources, expertise, and information - data sharing would also support this. AI is a rapidly evolving field, and regulators must develop specialised knowledge to keep pace with technological advancements and ensure that AI implementations in financial services are both effective and secure. This will require recruiting AI experts, investing in research and development, and creating partnerships with academia and industry. With adequate resources, regulators can ensure that AI adoption remains beneficial to consumers and financial stability, while proactively managing risks through informed oversight and targeted interventions.

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