Financial conduct authority's approach towards supervision and enforcement: Impact of RegTech and digital disruption

4

Financial Conduct Authority's Approach Towards Supervision and Enforcement

Impact of RegTech on Digital Disruption

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1. Introduction

The relationship between the financial services industry and technological developments has long been distinctive and enduring. Financial institutions have historically and consistently embraced technological innovations and new digital tools, whether in products, infrastructure, or consumer interface and engagement, to expand market reach, improve efficiency and develop new services. Consequently, financial supervisors and regulators have been tasked with ensuring that such innovations are deployed within a regulatory framework that upholds market integrity, protects and safeguards the interests of consumers, mitigates systemic risks and ensures financial stability. As the pace and scale of digital innovation and technological advancements accelerate, driven by the proliferation of algorithmic trading, digital assets, artificial intelligence (AI) and Big Data, the role of regulators in overseeing this ever-changing landscape becomes increasingly challenging and important.

In the UK, this regulatory responsibility falls to the Financial Conduct Authority (FCA), a body created in 2013 following the dissolution of the erstwhile regulator.[1] The FCA's mandate includes consumer protection, market integrity and the promotion of effective competition within financial services, and it is rooted in the Financial Services and Markets Act 2000 (FSMA 2000) and the Financial Services Act 2012.[2] To fulfil these objectives in an increasingly data-intensive society and the financial services industry, the FCA has taken tangible steps to

[1] Financial Services and Markets Act 2000 (FSMA 2000) c 8.
[2] Financial Services Act 2012 c 21.

embrace digital transformation and disruption. The regulator has kept pace and found innovative ways to adopt regulatory technologies (RegTech) and supervisory technologies (SupTech) that make use of technological tools and techniques, including but not limited to machine learning (ML), natural language processing (NLP) and cloud-based analytics platforms.

The FCA's embrace of technological innovations has been in parallel with its developments in supervisory approach, which has evolved toward a forward-looking and judgement-based approach. This shift moves beyond retrospective assessments or rigid compliance checklists, focusing instead on proactive risk identification and early intervention. Digitalisation has enabled the FCA to enhance its monitoring capabilities, especially in areas such as market surveillance, conduct supervision and financial crime detection. Through various projects and initiatives like Digital Regulatory Reporting (DRR), Tech and other sprints, and the deployment of AI-driven enforcement tools, the FCA has sought to embed innovation within its regulatory apparatus.[3]

This chapter examines the evolving role of the FCA as a regulator that succeeded its predecessor in turbulent times. It begins by tracing the regulator's institutional transformation following the financial crisis and the LIBOR scandal. It then evaluates the FCA's current supervisory and enforcement strategies, with a particular focus on its use of RegTech and SupTech. Further, it examines the legal and procedural challenges posed by the incorporation of technological innovations into regulatory apparatus, especially in relation to data governance, transparency and algorithmic accountability. Ultimately, the chapter argues that while the FCA's embrace of AI and data-driven tools offers the potential for more responsive, predictive and scalable regulation, it also demands scrutiny to ensure that core principles of fairness, due process and public accountability are not compromised in the pursuit of technological efficiency.[4] The analysis conducted in this chapter is based on statutory and legislative documents, rules and regulations framed thereunder, policy papers, case studies, news reports and existing academic scholarship.

2. Inside the FCA: Origins, Purpose and Powers and Adaptation to the Digital Era

This section explores the inception and purpose of the UK's financial regulator, the FCA, following the Great Financial Crisis 2007–08 (GFC) and expounds on the

[3] FCA, 'Innovation, AI and the Future of Financial Regulation' (Speech by Jessica Rusu, 17 April 2023). Available at: www.fca.org.uk/news/speeches/innovation-ai-and-future-financial-regulation.

[4] K Yeung, 'Algorithmic Regulation: A Critical Interrogation' (2018) 12 *Regulation & Governance* 505; J Black, 'FinTech and Financial Regulation: New Developments and Challenges' (2019) LSE Law, Society and Economy Working Papers 2/2019. Available at: www.lse.ac.uk/law/people/academic-staff/julia-black.

recalibrated enforcement mandate, as well as examines how the FCA is responding to the era of digital transformation and disruption.

2.1. FCA: Inception and Purpose

A few days before the erstwhile financial regulator, the Financial Services Authority (FSA), was replaced by new regulators, a national daily summarised its legacy as 'the watchdog that didn't bark'.[5] Although harshly worded, both empirical evidence and the opinion developed henceforth have concluded that the newspaper was not mistaken in declaring the FSA to be a weak enforcer and regulator.[6]

Established in 1997,[7] the FSA took over banking supervision from the Bank of England.[8] It was responsible for the supervision of financial institutions under the *tripartite* system, whereby the HM Treasury, the Bank of England and the FSA were collectively responsible for maintaining financial stability.[9] This system laid down operational rules for dealing with financial failures and crises, which were tested during the Northern Rock debacle[10] and the GFC, at which it very publicly failed.[11]

The FSA is remembered as incompetent and dishonest, not an enforcement-driven regulator, and for its failure to modernise and become *smarter*.

Fines imposed by the FSA were usually relatively low and it had a history of not prosecuting individual executives. It shied away from pursuing lengthy and expensive legal battles and, considering the level of penalties imposed, the fines imposed by the FSA were increasingly being viewed as just another business expenditure, which did not cause any significant impact, leading to the FSA's enforcement regime achieving little in terms of deterrence. The FSA was more concerned with *box-ticking* or compliance. As a result, its inaction was often interpreted as a sign of acceptance,[12] as well as political pressure to pursue a light-touch approach while

[5] J Treanor, 'Farewell to the FSA – and the Bleak Legacy of the Light-Touch Regulator' *The Guardian* (24 March 2013).

[6] JC Coffee, 'Law and the Market: The Impact of Enforcement' (2007) 156 *University of Pennsylvania Law Review* 229; E Ferran, 'Capital Market Competitiveness and Enforcement' [2008] SSRN Electronic Journal.

[7] In 1997, the Securities and Investments Board was replaced by the Financial Services Authority. However, the legislative infrastructure of the FSA under the *tripartite* system was established by the FSMA 2000. It was only post-2004, that the FSA took over the regulation and supervision of the mortgage and insurance markets. It should also be noted that, previously, the Securities and Investments Board had taken over the responsibilities of the eight other former regulators.

[8] R Peston, *Brown's Britain* (Short Books 2006).

[9] Tripartite's Memorandum of Association, retrieved from National Web Archives. Available at: www.fsa.gov.uk/pubs/mou/fsa_hmt_boe.pdf.

[10] Treasury Committee, *The Run on the Rock* (HC 2007–08, 56–1). Available at: https://publications.parliament.uk/pa/cm200708/cmselect/cmtreasy/56/56i.pdf.

[11] S K Blei, 'The British Tripartite Financial Supervision System in the Face of the Northern Rock Run' (Federal Reserve Bank of St Louis 2008).

[12] JW Markham, 'Regulating the Too Big to Jail Financial Institutions' (2017) 83 *Brooklyn Law Review* 517.

discharging its duties.[13] This was particularly concerning given the FSA's mandate to preserve financial stability, maintain trust in the financial system and protect consumers.[14]

The lack of a strong enforcement approach led to broader concerns regarding the ethical responsibilities of the regulator, especially in cases where it prioritised market freedom over consumer protection.[15] The FSA trusted that the markets could self-correct and discipline firms that took excessive risks and implemented risky business models. It naively believed that the senior executives would act in the interests of the consumers. Therefore, it spent its resources and time on obvious outliers rather than looking at and investigating systemic problems, or holding to account those liable for the GFC.[16] Along with not being able to hold firms and individuals liable and deter undesirable activities, the FSA relied on outdated IT systems that led to oversights and contributed to the buildup of systemic risks in the financial sector.[17] Thus, FSA's short reign was marked by its failure to prevent the meltdown of the UK's banking system[18] and being an inept regulator.[19]

Prior to 2013, the FSA was responsible for both prudential and conduct regulation. This left the regulator with too many objectives to manage and an inability to keep up with market innovations and advancements.[20] FSA, the UK's principal regulator, focused too much on the supervision of individual institutions and insufficiently on wider sectoral and system-wide risks.[21]

One of the major institutional reforms that took place in 2013, *vide* the Financial Services Act 2012, was the adoption of the so-called *Twin Peaks* structure, whereby the FSA ceased to exist and was replaced by two new institutions, the FCA and the Prudential Regulatory Authority (PRA).[22] Splitting the FSA into two new regulators was one of the immediate and direct implications of its mishandling of the financial sector, which allowed for failures like the GFC and the LIBOR rate manipulation.[23] Many believed that the creation of specialised regultors would lead

[13] Tony Blair's speech in 2005 on how the FSA is hindering competition.

[14] C Russo, *The Ethics of Banking and Financial Regulatory Authorities: A Study of the Bank of England, the Prudential Regulation Authority, the Monetary Policy Committee and the Financial Conduct Authority, a report annexed to the CSPL Commanding report to the UK Parliament on 'Striking the Balance: Upholding the Seven Principles of Public Life in Regulation'* (2016).

[15] R Wardrop and T Ziegler, 'A Case of Regulatory Evolution: A Review of the UK Financial Conduct Authority's Approach to Crowdfunding' (2016) CESifo DICE Report 14/2, 23–32.

[16] *Financial Services Authority, A Regulatory Response to the Global Banking Crisis* (March 2009) (The Turner Review).

[17] GJ Croll, *Spreadsheets and the Financial Collapse* (European Spreadsheet Risks Interest Group 2009).

[18] Along with prevention of this meltdown, the FSA has also been criticised for letting the individuals who were responsible get away. *See* The Turner Review (n 16).

[19] O Hail, 'Why the FSA was Split into Two Bodies' (*FT Adviser*, 8 May 2013).

[20] R Hadley, P Morgan, N Robson, and R Stephens, *An Overview of Enforcement by the Financial Services Authority (K&L Gates LLP 2007)*.

[21] The Turner Review (n 17).

[22] Financial Services Act 2012, which came into force in April 2013. HM Treasury, *A New Approach to Financial Regulation: Judgement, Focus and Stability* (2010).

[23] P Tannion and A Colclough, 'The New LIBOR Rules that Split Up the FSA' (29 April 2013); P Aldrick, 'Bank of England in the Spotlight over "Nod and Wink" to LIBOR Rigging' *The Telegraph* (4 July 2013).

to more effective supervision and enforcement.[24] Subsequently, on 1 April 2013, the FSA[25] ceased to exist and new regulatory institutions took its place.

The PRA functions as the prudential regulator in the UK. Its objectives are to promote and ensure the safety and soundness of banks, insurance companies, building societies and (some large) investment firms, thereby protecting customers.[26] By doing so, it aims to maintain the stability of the nation's financial system.

The FCA is responsible for regulating the conduct of business in the country, for protecting consumers, maintaining the stability and integrity of the financial system and promoting competition among service providers. Its strategic aim is to ensure that markets for financial services work smoothly.[27] In addition, the FCA has been given enhanced investigative and enforcement powers to address market abuses and systemic risks that may arise in the financial sector. The FCA is the primary regulator responsible for the investigation of financial misconduct.

The new twin regulators were set up to take strong enforcement action against individuals and firms, and they regularly cooperate on such matters.[28] When it was established, the FCA promised to be a more responsive regulator and to rectify its predecessor's mistakes.[29] However, these promises were met with some scepticism, as the statements of the former and the new regulators were very similar.[30] There were also concerns that enforcement might remain ineffective despite the regulatory overhaul, especially if the same regulatory culture persisted. In light of the legacy of the FSA and the reform that led to the formation of the FCA, it is pertinent to analyse how the new regulator has fared in terms of keeping up with the needs of the market.

2.2. RegTech and SupTech in Enforcement and Market Surveillance

RegTech and SupTech are beyond mere *buzzwords*. They refer to technologies, innovations and digital advancements that are used by regulators and firms to adapt to an increasingly digitalised financial landscape.

RegTech has provided firms with tools to drive efficiency and sustainability in regulatory compliance by addressing the need for standardisation, automation

[24] D Johnson, 'What Are the Merits of Taking a Hybrid Regulatory Approach toward the Enforcement of Corporate Financial Crime in the United Kingdom and United States of America?' (2022) 3(1) *Journal of White Collar and Corporate Crime* 23.

[25] Financial Services Act 2012, which came into force 1 April 2013.

[26] The business conducted by the firms authorised by PRA is regulated by the FCA, making these *dual regulated* firms.

[27] FSMA 2000, s 1B.

[28] FCA, *Annual Report and Accounts 2013–2014* (HC 349, 2014).; Bank of England, 'Policy' (2025). Available at: www.bankofengland.co.uk/pra/Pages/policy/handbook.

[29] FCA, 'Enforcement' (2024). Available at: www.fca.org.uk/about/how-we-regulate/enforcement.

[30] Both aim to use the enforcement tools available to attain credible deterrence. M Cole, 'Delivering Credible Deterrence' (Speech at the FSA Annual Financial Crime Conference, 27 April 2009).

and reduced compliance costs.[31] RegTech, a sub-set of fintech, is the application of technology to the regulation[32] or management of regulatory processes through technological innovations in the financial sector.[33] It is a tool for a top-down approach whereby regulators use RegTech to regulate and interact with their subjects for positive welfare outcomes for consumers, regulators and supervisors and to provide reputational benefits for the financial services sector.[34]

In contrast, SupTech describes the application of technology by regulators themselves to enhance supervision, market surveillance and enforcement.[35] The FCA has actively embraced both RegTech and SupTech. Further, the FCA has undertaken various activities that demonstrate that it recognises that traditional, manual oversight of the market is increasingly inadequate in an era that is marked by daily innovations, digital disruption and transformation.

The FCA's commitment to leveraging RegTech and SupTech aligns with its broader goals of fostering innovation, maintaining market integrity and adapting to technological disruption.[36] Since its establishment, the FCA has sought to 'see the functioning of the markets holistically'[37] and to adjust its supervision and surveillance structure accordingly. Over the past decade, the regulator's supervision and surveillance capabilities have adapted to the evolving data-driven and tech-enabled era and, hence, has been transformed from those of its predecessor.

RegTech has been prominently applied in areas of Anti-Money Laundering, Know Your Customer and combating financial crimes.[38] RegTech has demonstrated its ability to reduce manual and menial tasks, increase reporting accuracy and improve data quality through digital tools such as report automation, robotic process automation and visual analytics. Thus, their advantages include the ease of compliance and disclosure burdens, as well as ease of access to information for stakeholders.[39]

[31] EY, *Regulatory Technology (RegTech): Navigating the Right Technology to Manage the Evolving Regulatory Environment* (2019).

[32] DW Arner, J Barberis, and RP Buckley, 'The Evolution of Fintech: A New Post-Crisis Paradigm' (2015) 47 *Georgetown Journal of International Law* 1271.

[33] K Ghosh, 'RegTech: Bits and Bytes of Financial Regulation' (2021) 3(1–2) *Journal of Business Strategy Finance and Management* 103.

[34] I Anagnostopoulos, 'Fintech and Regtech: Impact on Regulators and Banks' (2018) 100 *Journal of Economics and Business* 7.

[35] PF Azuikpe and others, 'The Necessity of Artificial Intelligence in FinTech for SupTech and RegTech Supervisory in Banks and Financial Organizations' (2024) 12(2) *International Journal of Science and Research Archive* 2853.

[36] FCA, *Business Plan 2021/22* (July 2021. Available at: www.fca.org.uk/publications/business-plans/2021-22; FCA, *Data Strategy* (January 2020). Available at: www.fca.org.uk/publications/corporate-documents/data-strategy-2020.

[37] FCA, 'Effective Compliance with the Market Abuse Regulation: A State of Mind' (Speech by Julia Hoggett, 17 November 2017). Available at: www.fca.org.uk/news/speeches/effective-compliance-market-abuse-regulation-a-state-of-mind.

[38] T Butler and L O'Brien, 'Understanding RegTech for Digital Regulatory Compliance' in T Lynn, J G Mooney, P Rosati and M Cummins (eds), *Disrupting Finance: FinTech and Strategy in the 21st Century* (Palgrave Macmillan 2019).

[39] DW Arner, JN Barberis, and RP Buckley, 'FinTech, RegTech, and the Reconceptualization of Financial Regulation' (2017) 37 *Northwestern Journal of International Law and Business* 371.

Further, the COVID-19 pandemic in 2020 has accelerated the adoption of RegTech, as it highlighted the potential of technology in automating compliance, reducing costs and improving consistency in regulatory processes. However, RegTech implementation is not without challenges. These include the high cost of integration, concerns about data security, and the impact of market volatility on RegTech start-ups. These barriers may hinder equitable access and widespread deployment, especially among smaller financial institutions.[40]

The FCA has taken an active role in encouraging RegTech innovation through various internal and external initiatives. A prominent example of such an initiative is the RegTech Sprint, which involved collaboration with financial institutions and led to the development of the DRR[41] system. These efforts originated to demonstrate the FCA's commitment to automated, straight-through compliance and its advocacy for open-source technologies and semantic standards to improve data governance and interoperability.[42]

SupTech has also played a role in the transformation of the supervisory and enforcement approach of the FCA. The FCA has significantly invested in data-driven market surveillance systems that helps to detect market abuse, including insider dealing and manipulation.[43] Under the UK's market abuse regime, the FCA receives over 30 million transaction reports and 100 million order reports daily. These are processed through the market data processor, a cloud-based platform that applies algorithms to identify potential misconduct in near real time.[44] This level of automation enhances the FCA's surveillance reach and allows for continuous real-time monitoring that would otherwise not be practically feasible.

To improve its ability to detect irregularities, the FCA has adopted ML models that analyse massive transaction datasets and generate risk signals for review.[45] It uses ML to scan over millions of equity transactions daily and flag patterns potentially indicative of insider trading. These alerts are subsequently assessed by human analysts, illustrating a human–machine hybrid model of oversight.[46] The FCA has also experimented with network and graph analysis to uncover sophisticated misconduct schemes that traditional methods might miss, such as collusive

[40] European Banking Authority, 'EBA Analysis on RegTech in the EU Financial Sector' (2021). Available at: www.eba.europa.eu/sites/default/files/document_library/Publications/Reports/2021/1015484/EBA%20analysis%20of%20RegTech%20in%20the%20EU%20financial%20sector.pdf.

[41] FCA, 'Digital Regulatory Reporting' (10 February 2023) www.fca.org.uk/innovation/regtech/digital-regulatory-reporting.

[42] FCA and Bank of England, 'Digital Regulatory Reporting: Phase One Pilot Report' (October 2018) www.fca.org.uk/publication/discussion/digital-regulatory-reporting-pilot-phase-1-report.pdf.

[43] FCA, *Annual Report and Accounts 2021/22* (2022) 44, www.fca.org.uk/publication/annual-reports/2021-22.pdf; FCA, *Data Strategy Update 2022* (2022) www.fca.org.uk/publications/corporate-documents/data-strategy-update-2022.

[44] 'FCA's Work on Market Abuse and Manipulation – Update 17 June 2022' (17 June 2022) www.fca.org.uk/news/news-stories/market-abuse-manipulation-update.

[45] ESMA, 'Financial Innovation: RegTech and SupTech: Change for Markets and Authorities' (16 October 2018) www.esma.europa.eu/press-news/esma-news/regtech-and-suptech-%E2%80%93-change-markets-and-regulators.

[46] FCA, 'AI Update' (2023) 19–20, www.fca.org.uk/publication/corporate/ai-update.pdf.

behaviour or coordinated trading strategies. Such graph learning algorithms help detect hidden relationships in order and execution data that suggest manipulative behaviour,[47] such as cross-market spoofing or pump-and-dump schemes.

Beyond market abuse, the FCA has explored the usage of AI and ML techniques, such as random forest models, to support broader supervisory activities. In particular, these models have been investigated for their potential to identify patterns of firm behaviour associated with regulatory risk. While specific applications have not been publicly confirmed, the FCA has highlighted the promise of these approaches in supporting proactive supervision and enabling early interventions to reduce consumer harm.[48] The FCA has similarly used analytics to address financial crime, including fraud and money laundering, often in partnership with other agencies. It seeks to deploy AI tools to analyse, surveil and vet large volumes of suspicious activity reports and payment data to detect anomalous transactions or account networks.[49]

Another noteworthy initiative of the FCA embracing technological innovation includes an Authorised Push Payment (APP) Fraud TechSprint in 2022, whereby synthetic banking data was used to develop AI models that could detect payment scams. Several working prototypes emerged from the event, some of which were subsequently adopted by industry participants.[50] This demonstrates how collaborative experimentation has become a unique feature of the FCA's approach to technological innovation.

When misconduct is identified, the FCA's Enforcement Division relies on digital tools to manage and investigate cases efficiently.[51] Given its statutory powers under FSMA 2000 (including sections 165, 167 and 171), the FCA often obtains a large number of documents, emails and records per investigation.[52] This data is processed using e-discovery systems and NLP. These tools allow investigators to search for relevant communications, detect trading anomalies and reconstruct timelines to determine who had access to what information and when. NLP also assists in detecting cartel-like communication patterns or insider tips based on keyword clusters across emails or messages.[53] In internal trials, the FCA even tested chatbot technologies to help its staff navigate regulatory processes, although their role in enforcement remains limited.[54]

[47] FCA, 'Market Abuse Surveillance TechSprint' (9 October 2024) www.fca.org.uk/firms/techsprints/market-abuse-surveillance-techsprint.

[48] FCA, *From Maps to Apps: The Power of Machine Learning and Artificial Intelligence for the FCA* (2016). Available at: www.fca.org.uk/publication/documents/from-maps-to-apps.pdf.

[49] FCA, 'AI: Moving from Fear to Trust' (Speech, 23 February 2022). Available at: www.fca.org.uk/news/speeches/ai-moving-fear-trust.

[50] FCA, 'Authorised Push Payment (APP) Fraud TechSprint' (22–24 September 2022). Available at: www.fca.org.uk/events/authorised-push-payment-fraud-techsprint.

[51] FCA, *FCA to Improve Pace and Transparency Around Enforcement Cases* (2023). Available at: www.fca.org.uk/news/press-releases/fca-improve-pace-and-transparency-around-enforcement-cases.

[52] FSMA 2000, ss 165, 167 and 171.

[53] FCA, *Pilot Study: Bias in Natural Language Processing* (Research Note, 2022). Available at: www.fca.org.uk/publications/research-notes/pilot-study-bias-natural-language-processing.

[54] FCA, *AI Update* (2024), which integrates the UK government's five principles on the regulation of AI.

Despite these technological advances, regulatory decisions continue to rest with human officials. The FCA's Regulatory Decisions Committee retains ultimate authority to determine whether enforcement action is warranted, ensuring processes remain grounded in legal accountability and procedural fairness.[55] Thus, digital innovations have been increasingly common and have augmented rather than replaced the decision-making role of regulators.

These developments highlight the FCA's ongoing transformation into a regulator that keeps pace with technological and digital developments. Its investments in RegTech and SupTech enable it to monitor financial markets more effectively, enforce standards more rigorously and intervene earlier in cases of misconduct. However, the application of technology in supervision and enforcement is still at a nascent stage. It prompts further inquiry into how digitalisation is reconfiguring regulatory authority, reshaping institutional behaviour, and challenging approaches to supervision and enforcement. The FCA's *proactive* engagement with these tools not only positions it as a leader in regulatory innovation but also fuels its critics about the future role of regulators in an algorithmically governed financial landscape.

3. Becoming a Smart Regulator: The FCA in a Digital Age

A study of how the FCA adapts to technological disruption and digital transformation brought by AI that pervasively impacts all facets of consumer and market behaviour and redefines its regulatory approach is incomplete without exploring its internal transformation efforts and the accompanying challenges. The following sections examine the FCA's initiatives to harness data and AI as well as the ethical, legal and operational dilemmas that arise from such initiatives. Together, these sections demonstrate the FCA's approach to AI as a technology-agnostic, principles-based and outcomes-focused regulator while securing consumer protection, public trust and regulatory integrity in an era of algorithmic governance.[56]

3.1. From Digital Reporting to AI Labs

The use of AI by the FCA is not ad hoc or a one-time sporadic experiment but rather has been touted as a part of a strategic push to become a data-driven regulator.[57] The FCA has recognised that a better use of data and technology can lead to

[55] FCA, 'Regulatory Decisions Committee' (6 December 2024. Available at: www.fca.org.uk/about/who-we-are/committees/regulatory-decisions-committee.

[56] FCA, *AI Update* (2024). Available at: www.fca.org.uk/publication/corporate/ai-update.pdf.

[57] FCA, *Data Strategy 2020* (7 January 2020). Available at: www.fca.org.uk/publications/corporate-documents/data-strategy-2020.

better regulatory outcomes, and, hence, has launched several initiatives and pilot programmes. These include projects to transform regulatory data reporting and the creation of innovation hubs (like TechSprints, sandboxes and an AI lab).[58]

The DRR system is a flagship FCA initiative, launched in 2016–17 with the Bank of England. It aims at fundamentally altering how firms submit regulatory data to the FCA by making the process more efficient, accurate and machine-readable. Currently, the FCA receives over half a million scheduled regulatory reports from firms each year, which include multiple types of reports ranging from financial statements and capital adequacy returns to transaction reports. These reports are used for off-site supervision and identification of risks.[59] This system has historically been cumbersome, fragmented and expensive, and it has had multiple instances of data being inconsistent or delayed. The DRR project was established to address this issue by exploring machine-readable regulation and machine-executable regulation to develop standards and tools (such that regulatory rules and reporting instructions are written in a format that computers can interpret unambiguously) that allow for automated collection and compliance of data.[60]

To test the feasibility of DRR, the FCA and BoE organised TechSprints that tested these model-driven, machine-executable and -readable reporting systems.[61] Following the sprints, they partnered with seven major banks to pilot DRR.[62] These pilots and trials demonstrated the feasibility of linking firms' internal systems directly to regulatory requirements using a shared data model and code that reflects the FCA's rules. By January 2020, the FCA confirmed the model's viability, noting its potential to cut compliance costs and improve data quality.[63] It has since been embedded in its data strategy, a policy instrument. The DRR project shows

[58] FCA, *Fostering Innovation through Collaboration: The Evolution of the FCA TechSprint Approach* (March 2020). Available at: www.fca.org.uk/publication/research/fostering-innovation-through-collaboration-evolution-techsprint-approach.pdf; FCA, *FCA Celebrates 10 Years of Innovation and Launches AI Lab to Shape the Future of Financial Services* (17 October 2024). Available at: www.fca.org.uk/news/speeches/ten-years-fca-innovation-impact-and-opportunity; FCA, 'Financial Conduct Authority's Regulatory Sandbox Opens to Applications' (9 May 2016). Available at: www.fca.org.uk/news/press-releases/financial-conduct-authority%E2%80%99s-regulatory-sandbox-opens-applications.

[59] FCA and Bank of England, *Digital Regulatory Reporting: Pilot Phase 1 Report* (November 2018). Available at: www.fca.org.uk/publication/discussion/digital-regulatory-reporting-pilot-phase-1-report.pdf.

[60] ibid; FCA, *FCA launches Call for Input on the Use of Technology to Achieve Smarter Regulatory Reporting* (20 February 2018); Bank of England, *Digital Regulatory Reporting 2023 Update* (October 2023). Available at: www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/transforming-data-collection/digital-regulatory-reporting-2023-updates.

[61] Financial Stability Board, *The Use of Supervisory and Regulatory Technology by Authorities and Regulated Institutions* (9 October 2020). Available at: www.fsb.org/2020/10/the-use-of-supervisory-and-regulatory-technology-by-authorities-and-regulated-institutions-market-developments-and-financial-stability-implications.

[62] FCA, *Regulation Round-up January 2020* (2020). Available at: https://content.govdelivery.com/accounts/UKFCA/bulletins/274ab23.

[63] Bank of England, *Digital Regulatory Reporting Pilot Phase 1* (13 March 2019). Available at: www.bankofengland.co.uk/research/fintech/proofs-of-concept/digital-regulatory-reporting-pilot-phase-1.

how the FCA is embracing technology not only to detect misconduct but also to reduce compliance burdens and resources for consumers. It further demonstrates the FCA's approach of more timely data for earlier support and more targeted supervisory interventions before escalation is needed.

It also showcases that the FCA is actively developing creative, forward-looking solutions to meet the needs of an ever-evolving market and economy. By engaging in rounds of experimentation and trials and innovations through pilots and TechSprints before rolling out full implementation, the FCA has adopted a cautious but iterative approach, aiming to reduce delays while ensuring regulatory soundness. In doing so, the FCA has positioned itself not merely as a regulator that plays catch-up with digital transformation but as an equal player in shaping and driving innovation.

In parallel with DRR, the FCA overhauled and modernised its own data collection infrastructure through a project called RegData. It was rolled out in phases between 2020 and 2021, and all regulated firms and users migrated to this new platform.[64] While RegData's user interface is faster, more stable and more intuitive, the real transformation lies in its back-end architecture. RegData is built to be flexible and scalable, allowing the FCA to adapt data requirements, fix system issues more efficiently, and integrate incoming data directly into its analytics infrastructure.[65] The FCA has embedded RegData into its broader data strategy, aiming to use advanced analytics to transform how regulation is delivered. This system allows the FCA to plug regulatory data directly into data warehouses and analytical tools, including cloud-based systems. This enables supervisors to query submissions, identify trends and combine regulatory returns with other datasets, such as complaints or market activity, to gain a more holistic view of firms and emerging risks.[66]

The successful deployment of RegData demonstrates the FCA's capacity to implement large-scale digital reform, signalling its capability to support future SupTech applications. While RegData did not change the scope of data collected, it lays the foundation for more real-time reporting in the future. In this way, RegData demonstrates how the FCA has become an enabler of data-driven supervision.

Another unique initiative by the FCA has been its use of TechSprints, AI sprints and PolicySprints, which are hackathon-style events bringing together policymakers, regulators, firms, and experts and academics to collaborate on RegTech/SupTech solutions in a time-bound competition to develop prototypes, which are often precursors to pilots. Such collaborative initiatives benefit the FCA by advancing its own surveillance technology, educating the regulator and the industry on what's possible with AI and other technological advancements, and aiding

[64] FCA, 'All Reporting Firms Moved to FCA's New Data Collection Platform RegData' (2021). Available at: www.fca.org.uk/news/news-stories/all-reporting-firms-moved-fcas-new-data-collection-platform-regdata.

[65] FCA, 'FCA Announces Benefits of New Data Collection Platform RegData' (2020). Available at: www.fca.org.uk/news/news-stories/fca-announces-benefits-new-data-collection-platform-regdata.

[66] FCA, *Data Strategy Update 2022* (2022). Available at: www.fca.org.uk/publications/corporate-documents/data-strategy-update-2022.

in generating tools the FCA may adopt later. TechSprints have addressed issues like money laundering (eg, the 2019 Global AML TechSprint), consumer scams, regulatory reporting and AI in finance (the 2025 AI Sprint).[67]

These sprints are complemented by the digital and regulatory sandbox initiatives, which allow firms and innovators to test new products with regulatory support and supervision in a controlled environment.[68] Through these efforts, the FCA continues to position itself as a leader in RegTech development and helps foster a public–private innovation space where regulators benefit from market-generated solutions.[69]

Furthermore, the FCA established dedicated internal structures for AI oversight to further its AI agenda. In late 2024, it launched an AI lab within its Innovation Division. The lab is a hub for AI experimentation, internal coordination and strategic development.[70] Its AI input zone is an online consultation portal inviting stakeholders to submit views on AI use cases, risks and regulatory challenges. Through this feedback loop, the FCA gains insight into emerging trends and identifies potential regulatory blind spots.[71]

The FCA has stated that it does not intend to write entirely new AI regulations,[72] and that would not be feasible to undertake in silos. Instead, it will apply and adapt existing rules, such as the Senior Managers & Certification Regime (SMCR) and Consumer Duty, to AI and digital settings. The FCA is integrating AI into its existing regulatory landscape, and its initiatives and projects, from the AI lab to testing sandboxes, reflect that. By building internal expertise (eg hiring data scientists, training supervisors) and engaging externally (eg forums, Global Financial Innovation Network),[73] the FCA is establishing itself as a smart regulator that can oversee AI in finance and use it for supervision.

3.2. Challenges of AI in Regulation

While the benefits of AI and data technologies for regulators are increasingly recognised – particularly in terms of enhanced efficiency, broader surveillance scope and capacity, and more real-time insights – their adoption also presents an

[67] FCA, *TechSprints* (2025). Available at: www.fca.org.uk/firms/innovation/techsprints.

[68] FCA, *Digital Sandbox* (2025). Available at: www.fca.org.uk/firms/innovation/digital-sandbox.

[69] FCA, *Innovation Hub* (2025). Available at: www.fca.org.uk/firms/innovation.

[70] Alina Khan, 'FCA Launches AI Lab to Help Firms with Implementation' (*FT Adviser*, 17 October 2024). Available at: www.ftadviser.com/regulation/2024/10/17/fca-launches-ai-lab-to-help-firms-with-implementation.

[71] FCA, *AI Update* (2023). Available at: www.fca.org.uk/publication/corporate/ai-update.pdf.

[72] Nikhil Rathi, 'Detailed AI Rules not on the Cards for Now, Says UK Financial Watchdog' (*Reuters*, 5 June 2024). Available at: www.reuters.com/technology/detailed-ai-rules-not-cards-now-says-uk-financial-watchdog-2024-06-05/.

[73] FCA, *Artificial Intelligence (AI) Update – Further to the Government's Response to the AI White Paper* (2024). Available at: www.fca.org.uk/publications/corporate-documents/artificial-intelligence-ai-update-further-governments-response-ai-white-paper.

array of ethical, legal and operational challenges. For the FCA, the adoption of AI tools requires careful navigation of risks, such as algorithmic bias, lack of explainability, governance gaps and infrastructure limitations, all while preserving public trust and staying within the bounds of the legal and regulatory landscape.[74]

One of the primary challenges and concerns is the risk of biased or unfair outcomes. ML systems trained on historical data may unintentionally perpetuate and reinforce existing biases and disparities. For instance, if algorithms rely heavily on past enforcement patterns, they could disproportionately target smaller firms or those with less developed compliance systems, not because they currently present higher risks but because they were historically overtly scrutinised. These feedback loops can entrench systemic inequalities.[75]

As a regulator, the FCA is subject to legal obligations of fairness and non-discrimination, including the public sector equality duty.[76] This imposes a proactive obligation to consider the impact of regulatory decisions on protected groups. Accordingly, the FCA must ensure that any AI systems it deploys do not produce discriminatory outcomes without a clear and proportionate justification. Similar concerns have been raised in other sectors. An investigation highlighted how opaque credit-scoring algorithms can embed racial or socioeconomic biases.[77] The FCA must mitigate these risks in financial regulation by carefully designing and testing AI systems.[78] This includes using representative datasets, conducting impact assessments and ensuring human oversight. The FCA is aware of these risks and concerns and has publicly acknowledged them. Its 2022–23 AI Public–Private Forum addressed fairness in financial markets, and recent governance principles affirm that AI must be designed and deployed to uphold legal rights and avoid unjust discrimination.[79] Translating these commitments into practice, such as in insider trading detection, requires both technical interventions and procedural safeguards.

Transparency poses another challenge to incorporating AI and other digital tools and techniques, especially given the need for public accountability and effective regulation. Deep learning models, while technically powerful, are often criticised for their opacity. If an AI system identifies a firm for investigation, both the FCA and the affected party must understand the rationale. Without

[74] FCA, *AI Update* (2023). Available at: www.fca.org.uk/publication/corporate/ai-update.pdf.

[75] FCA, *Research Note: A Literature Review on Bias in Supervised Machine Learning* (2024). Available at: www.fca.org.uk/publications/research-notes/research-note-literature-review-bias-supervised-machine-learning.

[76] Equality and Human Rights Commission, *Artificial Intelligence: Meeting the Public Sector Equality Duty.* Available at: www.equalityhumanrights.com/guidance/artificial-intelligence-meeting-public-sector-equality-duty-psed.

[77] Tom Simonite, 'How Algorithms Can Discriminate in Lending' (*Reuters*, 22 December 2020).

[78] FCA, *Research Note: A Literature Review on Bias in Supervised Machine Learning* (2024). Available at: www.fca.org.uk/publications/research-notes/research-note-literature-review-bias-supervised-machine-learning.

[79] Bank of England and FCA, *Artificial Intelligence Public-Private Forum: Final Report* (2022). Available at: www.bankofengland.co.uk/-/media/boe/files/fintech/ai-public-private-forum-final-report.pdf.

transparency, it becomes difficult to justify regulatory action or defend it through due process. Regulatory legitimacy depends on the capacity to explain and substantiate decisions.[80] This concern has led to calls for *glass-box approaches* to AI, where decision-making processes are transparent and open to scrutiny. The FCA must strike a balance between model complexity and interpretability. Simpler models like decision trees may offer more transparency but less predictive power on complex datasets. Conversely, more advanced models require complementary tools to generate meaningful explanations.[81]

A practical solution is to use AI for the initial stages, while ensuring that human investigators review and validate final decisions. However, if algorithmic outputs influence and shape enforcement priorities significantly, the FCA may be required to disclose how such systems operate, particularly in legal proceedings. This raises additional issues, including protection of intellectual property, concerns about system manipulation and compliance with the Freedom of Information Act 2000.

These tensions are not new. In *Bridges v South Wales Police*,[82] the Court of Appeal criticised the lack of regulatory safeguards surrounding live facial recognition technology. Drawing from this precedent, the FCA must adopt internal policies that clearly define how AI tools are designed, tested, used and audited. Some progress has been made through the Digital Regulation Cooperation Forum, a joint initiative with the ICO, Ofcom and the CMA.[83]

Accountability represents another major area of concern. The FCA remains responsible if an algorithm fails to detect serious misconduct or wrongly implicates an innocent party. Public law requires that regulatory decisions be attributable to human authorities.[84] While the FCA has established internal oversight mechanisms, increased reliance on AI may give rise to automation bias, where staff defer too readily to algorithmic outputs. This phenomenon occurs when individuals assume that automated systems are inherently accurate, thereby compromising their independent judgement. To prevent this, FCA staff must be trained to evaluate AI-generated insights and to intervene when necessary.

The FCA appears to have implemented model risk controls, including validation protocols and audit trails. It is likely that responsibilities for AI oversight fall within the scope of the SMCR, which ensures accountability within firms and, by extension, within regulatory bodies.[85] External oversight is equally important. The FCA is accountable to HM Treasury and Parliament and could be subject to review in the event of AI-related failures.[86] Where personal data is involved, the independent

[80] FCA, *AI Update* (2023). Available at: www.fca.org.uk/publication/corporate/ai-update.pdf.
[81] ibid.
[82] *R (Bridges) v Chief Constable of South Wales Police* [2020] EWCA Civ 1058.
[83] FCA, *Digital Regulation Cooperation Forum* (2024). Available at: www.fca.org.uk/about/how-we-operate/who-work-with/drcf.
[84] FCA, *AI Update* (2023). Available at: www.fca.org.uk/publication/corporate/ai-update.pdf.
[85] FCA, *Senior Managers and Certification Regime* (2025). Available at: www.fca.org.uk/firms/senior-managers-certification-regime.
[86] FCA, *AI Update* (2023). Available at: www.fca.org.uk/publication/corporate/ai-update.pdf.

authority may also investigate compliance with data protection laws. The challenge, therefore, is to preserve accountability even as regulatory decisions become more complex and data-driven. The FCA can address this by ensuring robust human oversight and governance frameworks at every stage of AI deployment.

Operational capacity is equally critical. Developing and maintaining SupTech tools requires sustained investment in personnel, infrastructure and technology.[87] The FCA is funded largely through industry levies and competes with the private sector to attract technical talent.[88] Recruiting skilled data scientists to the public sector is difficult, particularly given salary disparities. The FCA has responded by establishing dedicated data teams and promoting its public interest mission as a compelling value proposition.[89]

System integration also poses challenges. While the RegData platform demonstrates the FCA's ability to manage complex IT projects, AI systems require even more robust infrastructure.[90] This includes scalable cloud environments, secure data pipelines and continuous performance monitoring.[91] The FCA has adopted cloud computing to process large volumes of market data, which in turn requires high standards of cybersecurity and operational continuity. The UK is also developing rules to address risks associated with reliance on third-party technology providers.[92]

Data quality is a foundational issue. AI models depend on timely, accurate and well-structured data. The FCA's initiatives, such as DRR and RegData, aim to improve data inputs for regulatory use.[93] However, harmonising datasets from diverse sources, including transaction reports, consumer complaints and firm filings, remains a labour-intensive task and continues to pose major integration challenges.

Operational resilience must also be a priority. The FCA must ensure that core systems function effectively, especially during periods of market volatility.[94] Supervisory tools must be reliable, scalable and rigorously tested.[95] The FCA's data strategy emphasises continuous improvement in digital governance and

[87] FCA, *Regulatory Initiatives Grid – April 2025* (2025). Available at: www.fca.org.uk/publication/corporate/regulatory-initiatives-grid-apr-2025.pdf.

[88] FCA, *Annual Report and Accounts 2024/25* (2025). Available at: www.fca.org.uk/publication/annual-reports/annual-report-2023-24.pdf.

[89] FCA, *AI Update* (2023). Available at: www.fca.org.uk/publication/corporate/ai-update.pdf.

[90] FCA, *RegData* (2021). Available at: www.fca.org.uk/firms/regdata.

[91] FCA, *FG16/5: Guidance for Firms Outsourcing to the 'Cloud' and Other Third-Party IT Services* (2016). Available at: www.fca.org.uk/publication/finalised-guidance/fg16-5.pdf.

[92] Bank of England, *CP26/23: Operational Resilience: Critical Third Parties to the UK Financial Sector* (2023). Available at: www.bankofengland.co.uk/prudential-regulation/publication/2023/december/operational-resilience-critical-third-parties-to-the-uk-financial-sector.

[93] FCA, *Data Strategy Update 2022* (2022). Available at: www.fca.org.uk/publications/corporate-documents/data-strategy-update-2022.

[94] FCA, *PS21/3: Building Operational Resilience* (2021). Available at: www.fca.org.uk/publications/policy-statements/ps21-3-building-operational-resilience.

[95] FCA, *Data Strategy Update 2022* (2022). Available at: www.fca.org.uk/publications/corporate-documents/data-strategy-update-2022.

infrastructure. Establishing a dedicated executive role for data and information oversight reflects this institutional focus.

Thus, while AI offers transformative potential for financial regulation, its integration into the FCA's supervisory functions must be tempered by a clear commitment to legality, fairness and transparency. The challenges, ranging from algorithmic bias and explainability to infrastructure demands and accountability, underscore the need for robust governance frameworks. Human oversight, institutional safeguards and meaningful public accountability are not optional but essential for maintaining trust and legitimacy in data-driven regulation. As the FCA continues to innovate, ensuring that technological advancement aligns with core regulatory principles will remain paramount.

4. Legal Concerns Regarding FCA's Digital Transformation

As the FCA increasingly integrates AI and digital tools into its regulatory landscape, an inquiry into the legal concerns becomes essential. This section examines the regulatory constraints and boundaries that govern the FCA's digital transformation. While much of the focus on RegTech and SupTech tends to be centred around innovation and efficiency, it is equally important to scrutinise the legal safeguards, accountability structures and procedural guarantees that accompany this adaptation to digital transformations.

4.1. Existing Legal Framework

The integration of AI and digital tools and techniques into regulatory supervision by the FCA is shaped by a legal and regulatory landscape, which is outlined in this section.

4.1.1. Data Protection and Confidentiality

As a data controller, the FCA is bound by the UK General Data Protection Regulation (UK GDPR) and the Data Protection Act 2018 (DPA 2018). The vast amount of supervisory data it processes, such as transaction reports, communications, personal account details and other records, often contains personal data. Generally, the FCA processes this information on the lawful basis of 'public task', which is linked to its statutory mandate under the FSMA 2000.[96] This implies that the FCA is allowed to use personal data when necessary to carry out its official duties and fulfil its mandates.

[96] Data Protection Act 2018, ss 8–10; UK GDPR, Art 6(1)(e) (public task).

Data protection law sets specific obligations, including fairness, security, data minimisation and purpose limitation. Under this law, automated decision-making is dealt with very strictly. Individuals have the right not to be subject to decisions made solely by automated processing that significantly affect them.[97] This is done to ensure that human oversight is in place, that affected individuals have a right to understand and challenge decisions, and that the decision-making process remains fair and explainable. Although the FCA does not currently render decisions (on enforcement or otherwise) without human involvement, any future expansion of AI-based or algorithm-based decision-making must remain within these legal bounds.

In addition to the data protection law, FSMA imposes strict confidentiality rules on the FCA.[98] The FCA is prohibited from the disclosure of confidential information obtained from firms unless permitted by a statutory provision, or if consent is explicitly provided. When deploying AI or digital tools, the FCA must ensure safeguarding personal data under GDPR and firm data under FSMA.

Therefore, the deployment of AI and digital tools involves a dual compliance challenge for the FCA. It is obligated to protect personal data under the UK GDPR and firm-sensitive data under FSMA. In 2020, however, the FCA mistakenly disclosed the personal information of over 1,600 individuals in response to a Freedom of Information request, highlighting the real risks of mishandling sensitive data even within a regulatory body.[99] The FCA's approach to using pseudonymised or synthetic datasets in initiatives such as TechSprints suggests that, as an institution, the FCA is aware of these obligations and makes a proactive effort to manage them responsibly.

4.1.2. Administrative Law and Procedural Fairness

The FCA, as a public authority, is subject to judicial review on various grounds.[100] These include illegality, irrationality and procedural impropriety.[101] The adaptation of AI and digital tools does not lessen these obligations.[102] In fact, it necessitates the formulation of new procedural safeguards to uphold the principles of natural justice and administrative law.

Procedural fairness requires that affected individuals have the right to make representations and challenge decisions. If AI-generated or digitally generated outputs materially contribute to or influence enforcement decisions, the FCA must disclose the reasoning and methodology behind those outputs. Failure to do so may lead to a breach of its duty of fairness. Moreover, overt or excessive reliance

[97] UK GDPR, Arts 5(1)(a)–(e), 22.

[98] FSMA 2000, s 348.

[99] FCA, 'Statement on FCA Data Breach' (26 February 2020). Available at: www.fca.org.uk/news/statements/fca-data-breach.

[100] Colin D Campbell, 'The Nature of Power as Public in English Judicial Review' (2009) 68 *CLJ* 90.

[101] *Council of Civil Service Unions v Minister for the Civil Service* [1985] AC 374 (HL).

[102] Jenner & Block, 'Government Pressure on Regulators Could Prompt Premature AI Adoption and a Surge in Judicial Review' (2024). Available at: www.jenner.com/en/news-insights/news/government-pressure-on-regulators-could-prompt-premature-ai-adoption-and-a-surge-in-judicial-review.

on algorithmic tools may lead to unlawfully fettering discretion. The exercise of regulatory judgement must remain context sensitive and case specific. Further, it should not solely depend upon historical data patterns contained or embedded in AI and digital systems.[103]

The FSMA 2000 embeds procedural protections for those subject to FCA enforcement action. These protections include the Warning Notice and the Decision Notice, which set out the grounds for proposed regulatory action and the FCA's final decision, respectively.[104] Affected parties may challenge these notices before the Tribunal, which conducts a *de novo* hearing.[105] This includes evidentiary safeguards such as cross-examination and expert testimony, providing an important check on arbitrary or opaque decision-making, especially where AI-generated insights or outputs have influenced enforcement priorities.[106]

In instances or cases of criminal enforcement, for example, there is a guarantee of the right to a fair trial.[107] Where the FCA relies on AI-generated analytics or outputs in evidence, the defence must be given meaningful access to the underlying models, data inputs and decision logic. This reflects emerging disclosure expectations in cases involving algorithmic trading systems, source code and others.[108]

As the FCA integrates AI and digital tools and techniques into its supervisory and enforcement approaches and more tangibly into its various functions, it must ensure that there exists human accountability, procedural fairness and transparency. Existing legal and regulatory frameworks, such as FSMA and the Human Rights Act, provide a good set of ground rules to follow, but their application must evolve to address the distinct challenges posed by algorithmic or digital decision-making, inputs and outputs.

4.1.3. Surveillance and Powers of Investigation

If the FCA were to engage in real-time market monitoring or the covert collection of personal communications data, its actions could engage legal duties under the Regulation of Investigatory Powers Act 2000 (RIPA) and the Investigatory Powers Act 2016 (IPA 2016).[109] While these frameworks are more commonly associated with law enforcement and intelligence services, they remain relevant even in

[103] M Veale and L Edwards, 'Clarity, Surprises, and Further Questions in the Article 29 Working Party Draft Guidance on Automated Decision-Making and Profiling' (2018) 34 *Computer Law & Security Review* 398.

[104] FSMA 2000, ss 387–395.

[105] FSMA 2000, s 133; pt 2; *Banque Havilland SA v Financial Conduct Authority* [2024] UKUT 00115 (TCC).

[106] FSMA 2000, ss 387–394; Tribunal Procedure (Upper Tribunal) Rules 2008, SI 2008/2698.

[107] Human Rights Act 1998, s 6; Criminal Justice Act 1993, art 6; See also *R v Grant* [2005] UKHL 2, [2006] 1 AC 1.

[108] Francesca Palmiotto, 'Preserving Procedural Fairness in The AI Era' (*Verfassungsblog*, 5 January 2023). Available at: https://verfassungsblog.de/procedural-fairness-ai.

[109] RIPA 2000, ss 1–5, 27–29; IPA 2016, pts 2–7.

financial regulation, particularly in market abuse investigations involving personal data.[110] This means the FCA must follow strict laws if it starts using surveillance techniques similar to those used by police or security services.

In practice, the FCA typically relies on firm-reported data, such as transaction reports and suspicious activity notifications.[111] Nonetheless, scenarios may arise where personal communications data, such as emails, phone records or messaging metadata, is accessed under judicial warrant or via inter-agency cooperation with various bodies like the National Crime Agency or the Serious Fraud Office.[112] In such cases, any AI-based or digital-based analysis and outputs performed on this data must strictly comply with the conditions under which the data was lawfully obtained.[113] So, even when working with other agencies or using warrants, the FCA must be careful to only use data in ways the law allows.

Moreover, the FCA is bound by principles of necessity and proportionality when processing data derived from such surveillance, even if it is not the primary subject of RIPA or IPA oversight.[114] Where investigatory techniques touch upon private life or communications, the FCA must ensure that its tools and processes align with both statutory safeguards and the right to privacy.[115] This means the FCA must always balance its actions with people's right to privacy and only use intrusive tools when absolutely necessary.

Thus, as the FCA increasingly engages with advanced data-backed analytics, including AI and digital surveillance tools, it must remain vigilant in upholding rights, standards and the law. This includes ensuring that any intrusion into private communications or personal data is not only lawful but also justified by a legitimate regulatory objective and proportionate in its scope and effect. Respect for privacy, legal transparency and proper authorisation must be reflected in every step of such processes. In doing so, the FCA can safeguard both regulatory legitimacy and build public trust, even as it adopts more innovative forms of supervision and enforcement.

4.1.4. Freedom of Information

The FCA is subject to transparency obligations under the Freedom of Information Act 2000.[116] While many requests may be declined due to statutory exemptions,

[110] FCA, 'EG 19.5 Regulation of Investigatory Powers Act 2000 (RIPA)' (FCA Handbook). Available at: www.handbook.fca.org.uk/handbook/EG/19/5.html.

[111] *See*, eg, FCA, 'Market Watch 70' (2022). Available at: www.fca.org.uk/publications/newsletters/market-watch-70.

[112] FSMA 2000, ss 165–76; Home Office, 'Operational Case for the Use of Communications Data by Public Authorities' (2016). Available at: https://assets.publishing.service.gov.uk/media/5a80226aed915d74e622cabd/operational-case-for-the-use-of-communications-data-by-public-authorities.pdf.

[113] FCA, 'AI Update' (2023). Available at: www.fca.org.uk/publication/corporate/ai-update.pdf.

[114] RIPA 2000, s 28; IPA 2016, s 2; *R (on the application of Catt) v Association of Chief Police Officers* [2015] UKSC 9, [2015] AC 1065.

[115] Human Rights Act 1998, s 6; European Convention on Human Rights, Art 8.

[116] Freedom of Information Act 2000, s 1.

such as regulatory confidentiality or the risk of market manipulation, there is increasing public interest in algorithmic governance and the usage of AI and digital tools.

The UK government has introduced an Algorithmic Transparency Standard that, while not binding on the FCA, signals a broader trend toward its adoption of *openness*.[117] The FCA could adopt voluntary practices such as publishing summaries of its use of AI in its annual reports or via the Digital Regulation Cooperation Forum. Excessive opacity is generally unwelcome, especially where decisions based on opaque technologies that impact regulated firms and individuals lead to the risk of undermining institutional legitimacy.[118]

In an era of increasing reliance on data and digital tools, the FCA faces growing public demand for transparency in algorithmic decisions. While it can legally withhold certain information under the Freedom of Information Act 2000, excessive secrecy, particularly around AI-driven decisions that impact firms and individuals, may lead to the erosion of public confidence. Although not legally required to follow the UK government's Algorithmic Transparency Standard, the FCA could voluntarily adopt clearer reporting practices, such as publishing summaries of its AI use. Doing so would help demonstrate accountability and build trust. Transparency about the role of technology in regulatory processes is not just good practice, as it becomes essential for preserving the FCA's institutional legitimacy in the age of digital disruption and transformation.

4.1.5. Financial Regulation and Internal Governance

There are recent developments in financial services legislation which have the potential to further shape the legal context for the FCA's use of AI. The Financial Services and Markets Act 2023 introduced a new secondary objective for the FCA, which is to facilitate the growth and international competitiveness of the UK economy.[119] This objective has been interpreted as encouraging innovation in regulatory practices, including the deployment of AI, RegTech, SupTech and other digital tools.[120] This implies that the FCA is now also expected to support innovation and economic growth, which may push it to adopt more advanced technologies like AI.

[117] Central Digital and Data Office, 'Algorithmic Transparency Recording Standard Hub' (*gov.uk*, 5 January 2023). Available at: www.gov.uk/government/collections/algorithmic-transparency-recording-standard-hub.

[118] Public Law Project, 'Securing Meaningful Transparency of Public Sector Use of AI' (October 2024). Available at: https://publiclawproject.org.uk/content/uploads/2024/10/Securing-meaningful-transparency-of-public-sector-AI.pdf.

[119] Financial Services and Markets Act 2023, s 26.

[120] ibid, s 1(3); FCA, 'Secondary International Competitiveness and Growth Objective Report 2023/24' (2024). Available at: www.fca.org.uk/publication/corporate/sicgo-report-2023-24.pdf; HM Treasury, *Policy Paper: Building a Smarter Financial Services Framework* (2022). Available at: www.gov.uk/government/publications/building-a-smarter-financial-services-framework-for-the-uk.

Moreover, provisions in the FCA Handbook, particularly the Senior Management Arrangements, Systems and Controls (SYSC) sourcebook, impose obligations on regulated firms to manage the operational risks associated with algorithmic systems.[121] Although these provisions apply to market participants, they arguably reflect normative standards with which the FCA itself should comply. In the context of algorithmic trading, rules derived from the Markets in Financial Instruments Directive require firms to implement safeguards such as kill switches, stress testing and pre-deployment validation.[122] Thus, it follows that any AI or digital systems used by the FCA for surveillance or enforcement purposes should be subject to similar oversight and control mechanisms. In simple terms, if the FCA expects firms to handle algorithm risks responsibly, it should hold itself to the same standards when using AI.

In addition, international frameworks offer relevant guidance. The EU's proposed Artificial Intelligence Act, the OECD's Principles on Trustworthy AI, and the FCA and Bank of England's AI Public-Private Forum Final Report all emphasise principles such as accountability, transparency and human oversight.[123] While these instruments are not binding on the FCA, they inform regulatory best practices and are likely to shape future guidance or sector-specific codes of conduct. This means the FCA should pay attention to global best practices, even if they are not legally required, to ensure responsible and trustworthy use of AI.

Therefore, the FCA's use of AI in supervision must align with a range of overlapping legal requirements. Current practice, characterised by *human-in-the-loop* decision-making, pseudonymised datasets and public engagement, suggests a cautious but proactive approach. As regulatory tools evolve, so must the FCA's internal controls, legal justifications and accountability mechanisms to ensure continued compliance with its statutory and constitutional responsibilities.

4.2. Accountability, Due Process and Fairness

The increasing use of AI, digital and algorithmic tools in regulatory enforcement has attracted significant scrutiny.[124] While its advantages and efficiency gains

[121] FCA Handbook, SYSC 4.1.1R, SYSC 13.1.6R (Operational risk); FCA, *Algorithmic Trading Compliance in Wholesale Markets* (2018). Available at: www.fca.org.uk/publications/multi-firm-reviews/algorithmic-trading-compliance-wholesale-markets.

[122] Directive 2014/65/EU (MiFID II), Arts 17(1)–(3); Commission Delegated Regulation (EU) 2017/589, Arts 12–15.

[123] Commission, 'Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act)' COM (2021) 206 final; OECD, *Recommendation of the Council on Artificial Intelligence* (2019). Available at: https://legalinstruments.oecd.org/en/instruments/oecd-legal-0449; FCA and Bank of England, *AI Public-Private Forum Final Report* (2022). Available at: www.bankofengland.co.uk/-/media/boe/files/fintech/ai-public-private-forum-final-report.pdf.

[124] DF Engstrom and others, 'Government by Algorithm: Artificial Intelligence in Federal Administrative Agencies' (2020) NYU School of Law, Public Law Research Paper No 20–54.

are patent and are being widely acknowledged, there are concerns regarding the potential erosion of principles of administrative justice, particularly in the context of financial regulation.[125] These principles include accountability, due process and fairness, each of which has profound implications for the legitimacy and legality of regulatory enforcement and the regulator itself.[126] While AI can help regulators work faster and smarter, it may also risk undermining the fairness and transparency that are essential in any legal process.

A primary concern where algorithmic tools influence enforcement action is whether persons or actors, such as authorised firms or their representatives, subject to regulatory scrutiny, are able to exercise all the procedural rights that are owed to them.[127] Due process in this context entails the right to notice, the right to be heard and the right to have decisions taken by an impartial adjudicator.[128] These protections are embedded in domestic administrative law as well as the Human Rights Act 1998.[129] Algorithmic opacity or hiding behind decisions taken using a digital tool may hinder these rights by obscuring the rationale behind decisions. For example, if the FCA were to prioritise investigations based on algorithmically derived 'risk scores', it must be capable of providing specific, intelligible reasons for that prioritisation, supported by identifiable data points rather than abstract references to a model.[130] This means people and firms affected by regulatory decisions should be able to understand and challenge them, even if AI tools are involved in the process.

Algorithmic outputs should not be treated as determinate conclusions but rather as components in a decision-making process that require human oversight and contextual understanding.[131] Enforcement decisions must ultimately rest on independently verifiable evidence and must remain subject to disclosure. These must be allowed to be challenged. While there has not yet been a reported case in which a decision by the FCA was overturned or upheld solely based on an AI tool, it is foreseeable that such litigation may arise as the usage and application of SupTech or digital tools expands. As a result, the FCA needs to maintain proper records of algorithmic design, limitations and audit trails that can withstand legal scrutiny.[132] AI tools should support decisions, not replace human judgement, and

[125] F Pasquale, *The Black Box Society: The Secret Algorithms that Control Money and Information* (Harvard University Press 2015).

[126] Mireille Hildebrandt, 'Algorithmic Regulation and the Rule of Law' (2018) 376 *Philosophical Transactions of the Royal Society A* 20170355.

[127] Danielle Keats Citron and Frank Pasquale, 'The Scored Society: Due Process for Automated Predictions' (2014) 89 *Washington Law Review* 1.

[128] European Convention on Human Rights, Art 6; Human Rights Act 1998, sch 1, pt I, art 6.

[129] Human Rights Act 1998, sch 1, pt I, art 6.

[130] Sandra Wachter, Brent Mittelstadt, and Chris Russell, 'Counterfactual Explanations Without Opening the Black Box: Automated Decisions and the GDPR' (2018) 31 *Harvard Journal of Law & Technology* 841.

[131] Michael Veale and Lilian Edwards, 'Slave to the Algorithm? Why a Right to an Explanation Is Probably Not the Remedy You Are Looking For' (2018) 16 *Duke Law & Technology Review* 18.

[132] OECD, 'Principles on Artificial Intelligence' (2019). Available at: www.oecd.org/en/topics/sub-issues/ai-principles.html.

the FCA must be ready to explain and defend how these tools were used if challenged in court.

Concerns about regulatory overreach are also prominent. The scalability of AI tools means regulators may be tempted to expand surveillance and enforcement capabilities without a proportionate increase in procedural safeguards.[133] Public law requires that powers be exercised proportionately and in accordance with legitimate goals and objectives. The use of algorithmic systems must therefore be targeted at serious misconduct, with mechanisms in place to avoid the over-penalisation of technical or low-risk breaches that harm no one. Oversight mechanisms, including judicial review, statutory panels and stakeholder consultations, are essential to prevent regulatory excess.[134] Just because AI can monitor more, it doesn't mean it should, and regulators must use it carefully and fairly, with proper checks in place.

There is scope for the FCA to institutionalise internal safeguards, such as forming an AI governance board or ethics committee tasked with reviewing algorithmic tools for bias, reliability and fairness. Doing so would enhance transparency and internal accountability, reflecting emerging best practices across the public and private sectors.[135] Furthermore, engagement with external experts and the publication of guidelines regarding AI use in supervision and enforcement would promote legitimacy and public confidence.[136] Setting up internal checks and sharing clear rules about AI use can help the FCA build trust, avoid misuse of technology and gain further legitimacy.

Beyond legal compliance, the wider normative concern is whether algorithmic enforcement transforms the nature of regulatory justice. Financial supervision should not be reduced to a mechanistic process devoid of human engagement. Supervisors are expected to detect non-compliances and breaches, foster good conduct, encourage compliance and maintain trust in regulatory institutions. Excessive reliance on automated tools may weaken these relational aspects of regulation.[137] The FCA has repeatedly described its supervisory approach as outcomes-focused and judgement-led.[138] These descriptors suggest a regulatory philosophy that values dialogue and discretion. AI should support, not replace, this model, and, as mentioned earlier, AI and digital tools should be helpers in supervision and not a replacement for existing processes.

Used prudently, AI can free supervisors from repetitive data processing tasks and allow them to focus on more complex, value-sensitive aspects of

[133] Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* (Harvard University Press 2015).

[134] UK Government, 'AI Regulation: A Pro-Innovation Approach' (White Paper, 2023). Available at: www.gov.uk/government/publications/ai-regulation-a-pro-innovation-approach/white-paper.

[135] Reid Blackman, 'Why You Need an AI Ethics Committee' (*Harvard Business Review*, 2022).

[136] FCA, 'AI Update' (2024). Available at: www.fca.org.uk/publication/corporate/ai-update.pdf.

[137] Iyad Rahwan, 'Society-in-the-Loop: Programming the Algorithmic Social Contract' (2017).

[138] FCA, 'Our Approach to Supervision' (2024). Available at: www.fca.org.uk/publications/corporate-documents/our-approach-to-supervision.

enforcement.[139] However, resource constraints may incentivise over-reliance on automation, which could undermine the quality and legitimacy of decisions.[140] If AI tools are not carefully designed to distinguish between material misconduct and insignificant anomalies, enforcement may become overly rigid. Without careful design, ML tools risk treating all anomalies uniformly, potentially leading to rigid or inappropriate enforcement responses that fail to account for the contextual differences between trivial irregularities and serious misconduct.[141] Therefore, any AI system deployed by the FCA must incorporate thresholds, contextual filters and human oversight to ensure proportional responses. In short, AI can help, but, without proper design and human checks, it could lead to unfair or overly harsh enforcement.

While the UK currently lacks case law directly addressing the use of AI by financial regulators, judicial review principles are increasingly being tested by analogous developments in administrative decision-making, where courts are beginning to grapple with the opacity, accountability and procedural fairness challenges posed by algorithmic tools.[142] In *R (Bridges) v South Wales Police*, the Court of Appeal held that the use of automated facial recognition technology violated rights under Articles 8 and 14 of the ECHR due to inadequate and insufficient safeguards.[143] Similarly, in the Dutch *SyRI* case, the courts found that an algorithmic system for fraud detection was incompatible with the right to privacy and the principle of non-discrimination.[144] These cases demonstrate that public authorities must apply rigorous legal standards when adopting novel technologies. These examples show that courts are willing to step in when automated systems threaten privacy, fairness or equality, something the FCA must keep in mind.

In the financial regulatory context, the use of algorithmic classifications, such as placing firms on high-risk internal watchlists without affording them procedural safeguards, could prompt legal challenges. Such practices may amount to de facto adverse decisions and thus attract the full range of administrative law protections.[145] The FCA has thus far avoided such practices, and recent consultations have shown a reluctance to introduce measures that could unduly harm firms' reputations. The principle of fairness requires regulators not only to act lawfully but also to treat regulated entities equitably throughout all stages of the enforcement process. This means the FCA must

[139] FCA, 'AI Update' (2024). Available at: www.fca.org.uk/publication/corporate/ai-update.pdf.

[140] Mirishli Shahmar Sakit, 'Regulating AI in Financial Services: Legal Frameworks and Compliance Challenges' (2024) 358 *Qanun* 29.

[141] Cary Coglianese and David Lehr, 'Regulating by Robot: Administrative Decision Making in the Machine-Learning Era' (2017) 105 *Georgetown Law Journal* 1147.

[142] Philip Sales, 'Judicial Review Methodology in the Automated State' (Speech at the Conference on Automation in Public Governance: Theory, Practice and Problems, Prato, September 2024) 1–2.

[143] *R (Bridges) v Chief Constable of South Wales Police* [2020] EWCA Civ 1058.

[144] *Rechtbank Den Haag*, 5 February 2020, ECLI:NL:RBDHA:2020:865.

[145] UK Government, 'Implementing the UK's AI Regulatory Principles: Initial Guidance for Regulators' (2023). Available at: www.gov.uk/government/publications/implementing-the-uks-ai-regulatory-principles-initial-guidance-for-regulators.

ensure firms are treated fairly and not penalised or flagged by AI tools without due process.

AI tools must also be capable of triage. A risk-based approach to enforcement requires that resource allocation and regulatory scrutiny be proportionate to the severity and likelihood of harm.[146] Human supervisors must retain discretion to assess whether an alert warrants escalation. Over-enforcement based on algorithmic flagging risks undermining both procedural fairness and operational efficiency. In simpler terms, AI should help focus attention where it's most needed and not flood or overwhelm the system with alerts that waste resources or cause unfair actions.

Thus, the integration of AI into FCA enforcement activity must be guided by principles of legality, transparency and accountability. The regulator has publicly committed to deploying technology in a responsible manner, and it must ensure that it is equipped and capable of meeting the challenges that might follow the usage of such technology. Continued transparency, external engagement and a willingness to adapt supervisory models are essential for sustaining public trust and legal defensibility. In a digital regulatory environment, justice must not only be done but also be demonstrably governed, reviewed and understood by human decision-makers. The goal is to use AI or digital tools in a way that improves regulation without sacrificing fairness or legality or eroding public trust in the system.

5. Conclusion

The FCA has undergone a significant transformation since its inception in 2013, evolving from the ashes of the FSA while trying to shed off the legacy of the erstwhile regulators. This shift reflects a more proactive, judgement-based regulatory approach focused on anticipating risks and safeguarding market integrity. As digitalisation accelerates in the financial sector, the ability of the FCA to effectively supervise, regulate and enforce depends on continued internal reform and the need to foster closer collaboration with the actors in the market. Further, the complexities introduced by innovations and new technologies require a regulatory approach that is anchored on adaptability, quick response and shared responsibility.

The cultural shift propagated by the FCA towards innovation and the adaptation of digital and AI tools has prepared it to lead in a world where technology plays a pivotal role in regulatory compliance and supervision. This includes the FCA's strategic use of SupTech solutions for market surveillance, enforcement automation and predictive supervision. However, the increasing reliance on digital tools also necessitates a conducive and collaborative regulatory landscape. The private sector, especially financial institutions and technology providers, will need to be actively

[146] FCA, 'Our Approach to Supervision' (2024). Available at: www.fca.org.uk/publications/corporate-documents/our-approach-to-supervision.

involved in shaping these landscapes. Close collaboration between regulators and other actors will be essential to ensure that technological innovations are implemented effectively while maintaining market integrity and ensuring the protection of consumers and vulnerable groups. This collaborative approach will be important in navigating the complexities of a digitalised financial world. As technologies such as AI, ML and blockchain reshape market operations, the FCA must continue engaging with non-state actors, private firms, academics and industry experts to refine regulatory frameworks that are flexible enough to accommodate innovation and competent to manage emerging risks. By doing so, the FCA can leverage industry expertise to better understand the risks posed by new technologies and create regulatory environments that encourage innovation without compromising market integrity and consumer safety.

The growing importance of public-private partnerships is evident in initiatives like the FCA's RegTech Sprint, which brings together financial institutions and technology providers to test and develop solutions for regulatory challenges. These partnerships will ensure that the FCA can effectively monitor market behaviour and enforce on a real-time basis. Events such as the APP Fraud TechSprint and initiatives like DRR and RegData demonstrate how digital tools are reshaping the FCA's operational capacity. The private sector's involvement is not merely about compliance; it must also bridge the regulatory knowledge gap, as needed to adapt to the rapidly evolving financial landscape.

Furthermore, the FCA's focus on cultural change extends beyond its internal reforms and aims to influence the behaviours and governance structures of the firms it regulates. Initiatives like the SMCR promote accountability at all levels, ensuring that firms align their operations with public interest goals. This cultural shift is equally important in creating a regulatory environment that encourages ethical business practices and transparency, fostering a stronger partnership between regulators and the financial services sector. As algorithmic supervision becomes more prevalent, instilling a culture of responsibility, auditability and transparency within the FCA and across regulated firms will be indispensable to ensuring procedural fairness and trust.

Therefore, the FCA's transformation and growing reliance on technology highlight the need for closer collaboration with the private sector to navigate the challenges of digital disruption. The regulator's success in the digital era will depend on its ability to foster a regulatory culture that is not only adaptable but also collaborative in nature. The FCA can create regulatory frameworks that promote innovation, ensure consumer protection and maintain market integrity by working closely with industry leaders, tech innovators and non-state actors. The increasing digitalisation of financial services demands this collaborative approach, where both the public and private sectors share the responsibility of shaping the future of regulation in an interconnected world.