ARTIFICIAL INTELLIGENCE (AI) IN FX MARKETS

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What is different about AI vs Conventional Algos

Established Algos

- Machine learning in markets is not new; regulators have long recognized AI use in capital markets and algorithmic trading.
- The current Code architecture already covers ethics, governance, execution, information sharing, and post-trade controls.
- Traditional algorithm governance assumes relatively stable logic that can be documented and approved at a point in time.
- This means the foundation is usable – but not yet specific enough for adaptive systems.

New pressure points

- LLMs, GenAI and agentic systems can act with less human intervention and may be harder to explain or supervise.
- Retraining, recalibration and third-party model updates can alter behaviour between formal approval points.
- Inference from data, synthetic communications and complex vendor dependencies create new conduct and resilience questions.
- Small technical changes can accumulate into material behavioural change.

Accelerating Industry Expectations

While machine learning has long been embedded across FX and related infrastructure, the rapid evolution of large language models and agentic workflows marks a step-change

$9.6tn Average daily FX turnover in April 2025, underscoring why conduct and control standards matter at scale.

75% Of firms in the BoE/FCA survey already reported using AI; **55%** of AI use cases involved some automated decision-making.

Why AI matters to FX Markets

Already an Electronic Market

- Electronic execution in spot FX is near 75% even in dealer-to-customer trading.
- Algorithmic execution is deeply embedded in major venues and workflows.
- AI therefore lands in a market already shaped by automation, speed and opacity concerns

Accelerating Supervisory Expectations

- FCA, IOSCO, ESMA, FSB, BoE and the MAS all advanced AI-related expectations during 2024–2026.

Thematic Convergence Across the Industry

Shared themes across 2024-2026

- **Human accountability must be preserved** even when systems adapt or automate.
- **Existing frameworks still apply**, but they do not fully resolve AI-specific issues.
- **Third-party and concentration risk** is becoming a frontline concern.
- **Model governance must evolve** to cope with advanced and agentic systems.
- **Stress testing and resilience thinking** are becoming more prominent in the policy conversation.

Illustrative signals from the research

- **BoE FPC:** agentic AI presents "particular risks spanning several channels". Link
- **FMSB:** where AI exhibits adaptive behaviour or higher autonomy, accountability must rest with humans. Link
- **MAS:** explicitly covers GenAI and AI agents, with expectations on oversight and proportionate model risk management. Link
- **UK Treasury Committee:** called for AI-specific stress testing and action on critical third parties. Link

Most important policy signal: agentic AI is increasingly being treated as **qualitatively different** from traditional ML or static algos by bodies such as the BoE FPC, MAS, IOSCO and FMSB.

Key Questions for the FX Industry in an AI Era

Key AI Issues	Themes	Questions for the Industry	Quotes / Regulatory Signals
• Profit-optimising AI can generate unethical outcomes (collusion, adverse selection) without human intent	Ethics	• If an AI system produces harmful or manipulative outcomes without human intent, who is accountable? • Should ethical standards apply to the outcomes AI creates, not just the intent behind its design ? • How should the industry think about "collusion" when AI systems converge on outcomes without communication or intent?	• "RL-based trading agents autonomously sustain collusive profits" – NBER July 2025 • "LLM-based pricing agents exhibit collusive-like behaviour" – Fish, Gonezarowski & Shorrer • "AI models could learn that extreme volatility might benefit their firms" – BoE, Apr 2025 • "AI may find ways to exploit market structure not anticipated by designers" – Fed 2025
• Agentic AI chains decisions and sub-delegates without human intervention • "Reasonable steps" unclear for adaptive ML systems • Continuous retraining blurs approval and change thresholds	Governance	• Who is accountable for AI systems that learn, adapt and act continuously after approval ? • How should firms govern cumulative model drift, rather than discrete system changes? • Are current controls sufficient for systems operating at machine speed?	• "Agentic AI presents particular risks spanning several channels" – BoE FPC, Apr 2026 • "Autonomous decisions must remain within preset and safe boundaries" – MAS 2025 • ESMA warning on incremental retraining – ESMA, Feb 2026 • "Accountability must rest clearly with humans even where systems adapt" – FMSB, Feb 2026
• AI derives client insight without explicit data sharing • AI compresses the decision window (price formation → execution → rejection), stressing legacy conduct concepts	Execution	• How can clients be meaningfully informed about execution strategies that continuously adapt? • Should explainability be an expectation when AI systems materially affect execution outcome? • How should last-look and pre-hedging principals be adapted for agentic workflows?	• GFXC Jan 2025 update addressed data use, not inference – GFXC • "Incremental changes may amount to material impact" – ESMA, 2026 "ML reliance increases model herding" – BIS, June 2024 • "Speed and automation increase opacity and reinforce execution asymmetries" – BIS, June 2024

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• AI can de-anonymise aggregated data through pattern recognition • AI-generated "market colour" can become client-specific • AI-generated communications may mislead or hallucinate	Information Sharing	• Should confidentiality principles extend to what AI can infer ? • When AI generates market colour or client communications, should that be made transparent ?	• "Reduced transparency associated with some AI techniques" – FMSB 2026 • IOSCO on accountability and misuse – IOSCO 2025 • "AI techniques reduce transparency around how conclusions are formed" – FMSB 2026
• New AI risks: model drift, adversarial inputs, concentration dependency • Compliance capability gap vs regulatory expectations • AI can make market swings sharper and lead to harmful outcomes even without deliberate misconduct.	Risk Management & Compliance	• How are firms equipped to manage AI failures that appear as degraded judgement rather than system outages ? • How are AI systems supervised? Can they be reliably stopped or be overridden? • Is reliance on common AI providers being considered for resiliency? • Are cyber and stress testing frameworks calibrated for adversaries and failures operating at machine speed?	• "Third-party dependencies and model risk are key vulnerabilities" – FSB 2024 • ESMA anchors AI oversight in compliance – ESMA 2026 • "AI could make markets more prone to sharp movements" – BoE FPC 2026 • "Model alignment and concentration can amplify market stress" – FSB 2024
• AI routing may override PvP hierarchy for efficiency • AI credit/risk models create asymmetric settlement risk views	Confirmation & Settlement	• Are AI decision records sufficiently meaningful to explain why a post trade action occurred ? • What verifications or secondary controls are needed for post trade actions by AI ?	• GFXC PvP-first hierarchy update – GFXC Jan 2025 • "Authorities are still early in monitoring AI vulnerabilities" – FSB, October 2025

Appendix - References

Author	Publication Date	Title	Executive Summary	Key Points	URL
Financial Conduct Authority (FCA)	Sep 2025 (updated Feb 2026)	**AI and the FCA: our approach**	Sets out the FCA's principles-based approach to supervising AI use in UK financial services, relying on existing regulatory frameworks rather than AI-specific rules.	- No new AI-specific regulation planned; reliance on existing frameworks - Emphasis on Consumer Duty, governance and accountability (SM&CR) - Focus on safe, responsible experimentation and innovation - Ongoing coordination with BoE and international regulators	https://www.fca.org.uk/firms/innovation/ai-approach
Bank for International Settlements (BIS)	Sep 2025	**BIS Triennial Survey – FX turnover**	Provides global FX market size, structure and trends, supporting analysis of electronic, algorithmic and data-driven trading.	- Comprehensive view of global FX market activity - Highlights growth in electronic and algo-driven FX trading - Key input to market structure analysis - Supports systemic and liquidity risk assessment	https://www.bis.org/statistics/rpfx25_fx.htm
Bank of England & FCA	Nov 2024	**Artificial Intelligence in UK Financial Services – 2024**	Joint survey of AI adoption across UK financial services, assessing use cases, governance maturity and emerging risks.	- 75% of firms already use AI; further growth expected - Rising use of foundation and third-party models - Automation common, but limited fully autonomous decision-making - Data quality, bias and third-party dependency are key risks	https://www.bankofengland.co.uk/report/2024/artificial-intelligence-in-uk-financial-services-2024
Financial Stability Board (FSB)	Nov 2024	**The Financial Stability Implications of Artificial Intelligence**	Global assessment of AI adoption in finance, highlighting systemic risks, GenAI developments and policy gaps.	- AI improves efficiency, compliance and analytics - Key vulnerabilities: third-party concentration, correlation risk, cyber risk - GenAI increases fraud and disinformation risk - Calls for enhanced monitoring and supervisory capabilities	https://www.fsb.org/2024/11/the-financial-stability-implications-of-artificial-intelligence/

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ESMA	Feb 2026	**Supervisory Briefing on Algorithmic Trading in the EU**	Provides guidance to promote consistent supervision of algorithmic trading under MiFID II, including AI considerations.	- Focus on governance, testing and pre-trade controls - Addresses outsourcing and third-party risk - Clarifies supervisory expectations across NCAs - Non-binding convergence tool	https://www.esma.europa.eu/press-news/esma-news/esma-issues-supervisory-briefing-algorithmic-trading
Bank of England (FPC)	Apr 2025	**Financial Stability in Focus – Artificial intelligence**	Macro-prudential assessment of how AI may affect financial stability over time.	- AI may boost productivity and decision-making quality - Potential risks from common model use and opacity - Emphasis on collective behaviour, not just firm-level risk	https://www.bankofengland.co.uk/financial-stability-in-focus/2025/april-2025
US Federal Reserve	Nov 2025	**Speech – Michael Barr on AI and financial stability**	Sets out US regulatory perspective on AI risks, governance and accountability in financial institutions.	- AI offers efficiency and risk-management benefits - Model risk management remains critical - Accountability remains with firm leadership - Supervisors expect strong governance frameworks	https://www.federalreserve.gov/newsevents/speech/barr20251111a.htm
FCA	Aug 2025	**Multi-firm review of algorithmic trading controls**	Reviews the adequacy of algorithmic trading controls at principal trading firms.	- Focus on governance, testing and risk controls - Emphasis on market conduct and integrity - Highlights good and poor practices under RTS 6	https://www.fca.org.uk/publications/multi-firm-reviews/algorithmic-trading-controls-high-level-observations
Global Foreign Exchange Committee (GFXC)	Jul 2021	**FX Global Code update – algo trading and disclosures**	Earlier update strengthening principles around algorithmic trading and disclosures.	- Additional guidance on algorithmic trading practices - Algo due-diligence and TCA templates introduced - Supports transparency and client comparability	https://www.globalfxc.org/press-releases/press-p210715/

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DLA Ppper	Apr 2024	**FCA & PRA AI update – SM accountability**	Legal analysis of UK regulatory expectations around AI accountability under SM&CR.	- AI use does not dilute senior management accountability - Strong focus on governance and oversight - Practical implications for AI operating models	https://www.dlapiper.com/en-gb/insights/publications/2024/04/fca-and-pra-ai-update-senior-managers-accountability-for-the-use-of-ai
Bank of England	Feb 2026	**Summary of AI roundtables**	Consolidates industry and regulator insights on AI risks and opportunities.	- Broad consensus on governance importance - Data, model risk and explainability key concerns - Strong emphasis on proportionate regulation	https://www.bankofengland.co.uk/minutes/2026/february/summary-of-ai-roundtables-feb-2026
FMSB	Feb 2026	**AI in Trading – Final Report**	Industry-led guidance on responsible AI use in trading markets.	- Practical guidance for AI deployment in trading - Strong focus on governance and controls - Aligns with regulatory expectations	https://fmsb.com/wp-content/uploads/2026/02/FMSB-AI-in-Trading_Final_12.02.26_FINAL.pdf
Monetary Authority of Singapore (MAS)	2025	**Consultation on AI Risk Management Guidelines**	Proposes detailed expectations for AI governance and risk management.	- Explicit model risk and governance expectations - Focus on explainability and human oversight - Influential benchmark for global firms	https://www.mas.gov.sg/publications/consultations/2025/consultation-paper-on-guidelines-on-artificial-intelligence-risk-management
UK Parliament – Treasury Committee	2024	**AI in financial services – inquiry report**	Parliamentary assessment of AI risks, regulation and accountability.	- Calls for clearer accountability frameworks - Emphasis on consumer protection and stability - Supports regulator-led, principles-based approach	https://publications.parliament.uk/pa/cm5901/cmselect/cmtreasy/684/report.html
FIA	2024	**FIA cautions CFTC on AI regulation**	Industry response warning against overly prescriptive AI regulation.	- Advocates principles-based, risk-focused rules - Warns on innovation and liquidity impacts	https://www.fia.org/fia/articles/fia-cautions-cftc-regulation-ai
ESMA	Feb 2026	**Supervisory Briefing on Algorithmic Trading (PDF)**	Full technical supervisory briefing referenced above.	- Detailed supervisory expectations - Practical tools and definitions for NCAs - Explicit reference to AI-enabled algorithms	https://www.esma.europa.eu/sites/default/files/2026-02/ESMA74-1505669079-10311_Supervisory_Briefing_on_Algorithmic_Tradin