



INTEGRUM

Regulatory Update

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CONSULTATION ON ARTIFICIAL INTELLIGENCE RISK MANAGEMENT

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INTRODUCTION

The Monetary Authority of Singapore (“**MAS**”) published a consultation paper with draft Guidelines on managing Artificial Intelligence (“**AI**”) risks for Financial Institutions (“**FIs**”). The Guidelines explain what MAS expects for safe and responsible use of AI, alongside the existing Fairness, Ethics, Accountability and Transparency principles. The Guidelines cover all types of AI, including Generative AI and AI agents, and suggest a risk-based, proportionate approach.

MAS recognises that AI risks differ based on an FI's size, scope and business model, and proposes that implementation be tailored accordingly. Even where AI is not central to operations, MAS proposes that FIs establish basic policies that identify an accountable owner, define permitted and prohibited uses (e.g., no client data in public tools), require human review of outputs, maintain an approved tools list and approval process, provide staff training, perform compliance testing and conduct policy reviews.

This regulatory update provides a summary of the key proposals that may be implemented post-consultation and that FIs should take note, given the potential for these proposals to significantly impact business operations.

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KEY PROPOSALS AT A GLANCE

Category	Proposed Requirements
Applicability	The Guidelines are proposed to apply to all FIs in Singapore. FIs in Singapore that are branches and subsidiaries may leverage group frameworks where those meet MAS' expectations.
Scope	<p>MAS proposes that "AI" should cover AI models, systems and use cases, defined as follows:</p> <ul style="list-style-type: none"> - A model is a method or approach which converts assumptions and input data into outputs such as estimates, decisions, or recommendations; - A system can comprise one or more models and other machine-based components; - A use case refers to a specific real-world context that the model or system is applied to; and - AI includes use cases involving models or systems that learn and/or infer from inputs to generate outputs such as estimates, predictions, content, summaries, recommendations, or decisions that may influence physical or virtual environments, and vary in their levels of autonomy and adaptiveness after deployment.¹ Calculators or tools whose outputs are solely based on predefined programming logic or rules would not be regarded as AI for the purpose of the Guidelines.
Governance and Oversight	Boards and senior management will be expected to oversee AI risk, set clear roles and responsibilities, include AI risks (where material) in the risk appetite, ensure resources and training, and the FI may be expected to set up a cross-functional AI risk committee if overall AI exposure is material.
Core Systems, Policies and Processes	<p>AI Identification: FIs may have to define what counts as AI, set processes and controls to spot AI use consistently across the firm, and keep records.</p> <p>AI Inventory: FIs may have to keep an up-to-date list of all AI use cases, systems and models, with key details (purpose, data, status, risk rating, responsible owners, links to documentation).</p> <p>Risk Materiality: FIs may have to use a consistent method to rate each AI use case by impact, complexity and reliance, and ensure residual risk is within appetite before go-live.</p>
AI Lifecycle Controls	<p>MAS suggested some controls that could be calibrated based on their relevance to the AI use cases, systems or models, as follows.</p> <p>Apply Controls Based on Risk: For higher-risk AI, FIs could have contingency plans and, where appropriate, "kill switches" and fallback options.</p> <p>Data Management: FIs could use fit-for-purpose data, check for representativeness of the data, work on data quality, and adopt suitable data privacy.</p>

¹ For the purposes of the Guidelines, this would generally include AI based on machine learning, deep learning, reinforcement learning techniques, as well as Generative AI, AI agents and any newer AI technologies.

Category	Proposed Requirements
	<p>Transparency and Explainability: FIs could set the right level of transparency and explanations, especially where AI affects customers or regulated activities.</p> <p>Fairness: FIs could define what would count as 'fair outcomes', check for bias, and document how issues are fixed.</p> <p>Human Oversight: FIs could specify who can intervene, how and when. FIs could also record interventions and lessons learned.</p> <p>Third-Party AI: FIs could do proportionate due diligence and testing, set vendor obligations (notifications, change management, data protection, audit rights), manage concentration and supply-chain risks, and plan contingencies.</p> <p>Selection: FIs could choose algorithms and features for good reason, balancing performance with simplicity, transparency and fairness.</p> <p>Evaluation and Testing: FIs could define metrics and thresholds, test for stability, bias and errors, use data that reflects real-world use, for GenAI and agents, address hallucinations, unsafe or biased outputs, data leaks and adversarial threats.</p> <p>Technology and Cybersecurity: FIs could use secure environments, strong access controls and monitoring, test for vulnerabilities, put safeguards in place.</p> <p>Reproducibility and Auditability: FIs could keep documentation so others (reviewer or auditor) can understand and reproduce the model and its results.</p> <p>Pre-Deployment Reviews: FIs could arrange an independent review before go-live, with deeper validation for higher-risk AI, check technology and cyber readiness.</p> <p>Post-Deployment Monitoring: FIs could track performance, drift and fairness, set alerts and escalation, retrain or roll back if needed, re-validate high-risk AI periodically, and trigger reviews on material changes.</p> <p>Change and Decommissioning: FIs could control changes with versioning and rollback, apply stronger controls for automatic updates, and retire systems securely.</p>
Capabilities and Infrastructure	Post implementation, MAS proposes training and resourcing teams appropriately, ensuring the tech environment is reliable, scalable and secure, with suitable storage, networks and data pipelines.
Timelines	MAS initially proposes a 12-month transition after the final Guidelines are issued.

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