Designing Global Financial Governance for Artificial General Intelligence

Andrew Hummel

andrewhummel22@gmail.com

September 23, 2025

Disclaimer: These suggestions are presented as preliminary observations and are open to revision. I welcome feedback.

Abstract

Artificial General Intelligence (AGI) is poised to transform global finance, enabling autonomous trading, credit scoring, and compliance at speeds beyond the reach of national regulators. Yet existing approaches—the EU's AI Act, U.S. agency guidance, and Asia-Pacific sandbox regimes—remain fragmented and ill-suited to AGI's systemic, cross-border risks. This paper maps these frameworks, identifies conflicts in definitions, liability, and data-sharing, and models how AGI-driven financial markets could generate volatility and algorithmic collusion that overwhelm today's supervisory tools. Drawing on comparative legal analysis and scenario testing, it proposes a layered governance architecture: global AGI safety standards, joint supervisory "colleges" for real-time oversight, and a treaty-backed rapid-response mechanism. By integrating technical, economic, and regulatory evidence, the study offers policymakers and financial institutions a practical blueprint for coordinated oversight that preserves market stability and fairness while enabling responsible AGI innovation.

Keywords: Artificial General Intelligence (AGI); Global Financial Governance; Cross-Border Regulation; AI Safety Standards; Financial Stability

1 Introduction

Artificial General Intelligence (AGI)—machine systems capable of human-level reasoning and autonomous decision-making—has the potential to transform global finance more profoundly than any previous technological advance. Already, narrow AI supports algorithmic trading, real-time fraud detection, and automated credit scoring, but AGI would extend these capabilities to adaptive strategy formation, multi-market arbitrage, and complex risk management without human supervision. Such capabilities could accelerate capital flows, compress decision cycles to milliseconds, and create feedback loops that exceed the reach of today's national regulators. Yet financial governance remains fragmented. The European Union's AI Act relies on risk-tier classifications and strict liability, the United States favors sector-specific rules and market-based compliance, and Asia−Pacific hubs like Singapore prioritize innovation sandboxes. These divergent approaches—designed for narrower AI systems—risk leaving systemic blind spots as AGI emerges. Without coordinated oversight, AGI

If interested in viewing the remainder of this project, please contact me. Thank you