

CHAPTER 3

GLOBAL FINANCIAL STABILITY REPORT

Chapter 3 assesses recent developments in AI and Generative AI and their implications for capital markets. It presents new analytical work and results from a global outreach to market participants and regulators, delineates potential benefits and risks that may arise from the widespread adoption of these new technologies, and makes suggestions for policy responses.

Generative AI and related breakthroughs have the potential to dramatically increase the efficiency of capital markets—trading, investments, asset allocation—through AI-assisted process automation and analysis of complex unstructured data, and evidence suggests these effects are already beginning to be felt. New evidence from labor markets and patent filings suggests that adoption of AI in capital markets is likely to increase significantly in the near future, and analyses of pricing patterns and trading dynamics already show changes in some markets consistent with the adoption of these new technologies.

In addition, AI could cause large changes in market structure through the greater and more powerful use of algorithmic trading and novel trading and investment strategies, which in turn may increase turnover and asset correlations and drive prices to reflect new information at an ever-increasing pace. However, based on outreach conducted with both market participants and regulators, most current use of AI appears to be an extension of existing trends in the use of machine learning and other advanced analytical tools; more significant changes are a medium- to long-term concern.

AI may actually reduce financial stability risks by enabling superior risk management, deepening market liquidity, and improving market monitoring by both participants and regulators.

At the same time, new risks may arise:

- Increased market speed and volatility under stress, especially if trading strategies of AI models all respond to a shock in a similar manner or shut down in response to an unforeseen event.
- More opacity and monitoring challenges, as AI spurs further migration of market-making and investment activities to hedge funds, proprietary trading firms, and other nonbank financial intermediaries (NBFIs) and creates uncertainty about how AI models used by different investors and traders could interact.
- Increased operational risks as a result of reliance on a few key third-party AI-service providers that dominate computational power and large language model services.
- Increased cyber and market manipulation risks, particularly in generating fraud and social media disinformation.

While many of these risks are adequately addressed by existing regulatory frameworks, relevant authorities should consider additional policy responses:

- Undertake the calibration of circuit breakers and a review of margining practices in light of potentially rapid AI-driven price moves.
- Enhance monitoring and data collection of the activity of large traders, including NBFIs.
- Address dependency on data, models, and technological infrastructure by requesting a risk mapping from regulated entities (that is, data on the internal and external interconnections and interdependencies that are necessary to deliver the institutions' critical services).
- Adopt a coordinated approach for the definition of critical AI third-party service providers and continue to strive for resilience in capital markets by enhancing cyberattack protocols.

- Adopt measures that ensure continued market integrity, efficiency, and resilience of over-the-counter markets when AI use proliferates.

To see the full report, please refer to the English version here: <http://IMF.org/GFSR-October2024>